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CLIMATIC HANDBOOK FOR POINT MUGU AND
SAN NICOLAS ISLAND, PART II. UPPER-AIR
DATA

Robert de Violini

Pacific Missile Range
Point Mugu, California

19 January 1974

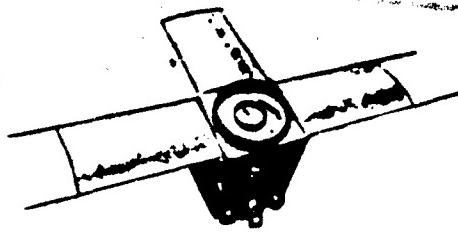
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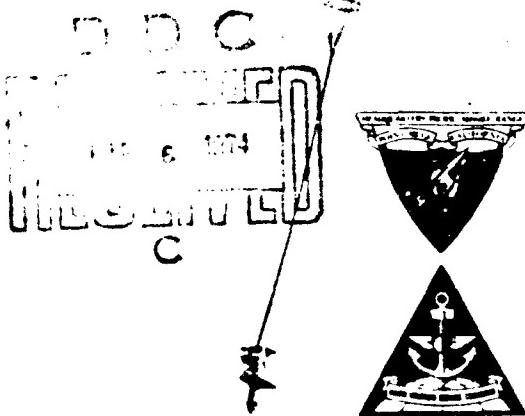
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CLIMATIC HANDBOOK FOR
POINT MUGU AND SAN NICOLAS ISLAND,
PART II, UPPER-AIR DATA

By

ROBERT de VIOLINI
Geophysics Division

19 January 1974



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Point Mugu, California

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PACIFIC MISSILE RANGE

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POINT MUGU, CALIFORNIA

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Commander

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Approved by:

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Meteorology	Upper-air data											
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Point Mugu, California	Temperature											
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <p>In this handbook, upper-air climatic data for Point Mugu and San Nicolas Island relating to wind, temperature, pressure, and density between sea level and 200,000 feet (62 kilometers) are presented by both month and season. This publication is a companion volume to PMR-TP-74-1, "Climatic Data for Point Mugu and San Nicolas Island, Part I, Surface Data."</p>												

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PREFACE

The climatic handbooks for Point Mugu and San Nicolas Island are intended as basic references both for personnel of the Pacific Missile Range's Geophysics Division, and for those who are now using or are planning to use, the facilities of the PMR. These volumes contain descriptions of the surface (Part I) and upper-air (Part II) weather phenomena which may influence the scheduling or results of operations carried out on the range. The extensive revisions contained in these publications dictate that the two earlier publications of similar name (PMR-MR-67-2 and PMR-MR-69-7) should be discarded.

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The present volumes should be considered as complementary to the Point Mugu Forecasters Handbook (PMR-TP-72-1, AD 747641) of 1 April 1972. That publication contains technical discussions of meteorological phenomena affecting both the local Point Mugu-Ventura County area and southern California in general, and is designed for use by the professional meteorological community.

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SUMMARY

Upper-air meteorological data—primarily winds and temperatures—for Point Mugu and San Nicolas Island have been summarized and are presented here in two sections.

The first section includes the altitude range from sea level to 100,000 feet, or 31 kilometers, obtained through the use of rawinsonde data to that altitude from San Nicolas Island. Supplementary data from Point Mugu balloon soundings are included below 60,000 feet. The data provided include occurrence frequencies of wind velocity components, mean values and ranges of temperature, moisture, and height at the standard pressure levels, and the mean vertical patterns of the temperature and of the zonal and meridional wind components.

The second section presents somewhat similar data, but for altitudes extending above 100,000 feet. From data obtained from the firings of meteorological rockets at Point Mugu, mean pictures of the wind and temperature patterns at these higher altitudes are provided to approximately 200,000 feet, or 61 kilometers.

Two appendixes present preliminary summaries of balloon-borne ozonesonde data and falling sphere measurements of high-altitude winds and thermodynamics. A third appendix provides comparison data from the 1962 U.S. Standard Atmosphere and the 1956 Standard Atmosphere Supplements as they apply to the Point Mugu-San Nicolas Island area.

INTRODUCTION

Upper air data (wind, temperature, pressure-height, moisture, etc.) for Point Mugu and San Nicolas Island are presented here to supplement the surface climatic data found in Part I (reference 1) of this publication. Station locations and histories are also to be found in that volume. Technical discussion of meteorological phenomena affecting Southern California may be found in reference 2.

The upper-air data are given here in two sections, according to altitude. The lower portion, between the surface and 100,000 feet (about 31 kilometers*) is based on balloon-borne rawinsonde data from San Nicolas Island and Point Mugu, California. Tables in appendix A summarize ozone data in this lower portion. The upper portion extends to 200,000 feet (about 62 kilometers). It is based on data collected from firings of meteorological rockets at Point Mugu. Tables in appendix B extend these data to 280,000 feet (85 kilometers) based on preliminary analyses of falling-sphere data from the high-altitude Viper-Dart-Robin system.

*In the text, conversions from feet to kilometers and vice versa have been rounded off.

TERMINOLOGY

The terms and units in this publication are those in common meteorological usage. They are listed below, with some definitions and conversion factors.

WIND SPEED

Given in knots or meters per second (this difference is a result of the source tabulations having been prepared in differing formats). One knot is 0.514791 meter per second, 1.15155 miles per hour. One meter per second is 1.94254 knots, 2.23694 miles per hour.

WIND DIRECTION

Always the direction from which the wind is blowing. In upper-air measurement, directions are usually given to the nearest 10 degrees (a 36-point compass) as measured clockwise from true North, but in many data tabulations, direction is given to 16 points of the compass (N, NNW, NW, WNW, etc.). Values of the 16-point compass in degrees are provided in table 1.

Table 1. Wind Direction Conversion Table

Compass Point	Degrees True	Range (Inclusive Degrees)
N	000	349 to 011
NNE	022.5	012 to 033
NE	045	034 to 056
ENE	067.5	057 to 078
E	090	079 to 101
ESE	112.5	102 to 123
SE	135	124 to 145
SSE	157.5	147 to 168
S	180	169 to 191
SSW	202.5	192 to 213
SW	225	214 to 236
WSW	247.5	237 to 258
W	270	259 to 281
WNW	292.5	282 to 303
NW	315	304 to 326
NNW	337.5	327 to 348
N	360	349 to 011

WIND COMPONENTS

Since wind velocity is a vector quantity having both magnitude and direction, it is often convenient for purposes of numerical manipulation to resolve the wind into its component parts. A northwesterly wind, for example, has both north and west components and can be described in those terms alone. The north-south component is the meridional or U component, the east-west component is the zonal or V component. The south and west portions are positive. Thus a -14 knot meridional (or U) component and a +10 knot zonal (or V) component combine to form a resultant wind velocity of 306 degrees at 17 knots. Summarized wind data are often presented in terms of the zonal and meridional components only.

TEMPERATURE

In degrees Celsius.

PRESSURE

In millibars. One thousand millibars equal 29.53 inches of mercury, 14.5038 pounds per square inch. Ten pounds per square inch equal 689.476 millibars.

RELATIVE HUMIDITY

In percent of saturation (100 percent).

HEIGHT

In feet or kilometers. Supplementary scales indicating the secondary unit of measurement are included in the figures. One thousand feet are 0.3048 kilometer; one kilometer is 3,280.8399 feet. Conversion listings for feet to kilometers and kilometers to feet are incorporated in tables C-1 and C-2 in appendix C.

The several major regions of the atmosphere (indicated in the temperature-altitude profile of figure C-1 in appendix C) are generally defined by their temperature characteristics, as in the following paragraphs.

TROPOSPHERE

The lowest region of the atmosphere, the troposphere, is surface-based and is the region within which the major portion of weather phenomena occur. It is characterized by a general decrease of temperature with increasing altitude. The top of the troposphere is the tropopause. This level can be defined as the height (above 500 millibars) at which the temperature lapse rate decreases to become 2 Celsius degrees or less per kilometer. The height and temperature of the tropopause vary with the latitude, and to some extent, with the time of the year. It is highest and coldest in the tropics, occurring as high as about 18 kilometers (60,000 feet), and has a mean temperature of nearly -80°C. At midlatitudes, the tropopause is often found near 11 kilometers (36,000 feet) and with a mean temperature of about -56°C. The average tropopause height in polar regions is close to 9 kilometers (30,000 feet) and is higher in summer than in winter. The mean tropopause temperature at high latitudes is nearly -53°C and is warmer in summer than in winter.

STRATOSPHERE

This region extends upward from the tropopause to about 50 kilometers (164,000 feet). It is a very stable region and is characterized by a general increase of temperature with altitude. The top of the stratosphere is the stratopause. Its temperature is close to -3°C.

MESOSPHERE

This region extends upward from the stratopause to about 80 kilometers (260,000 feet). It is characterized by a general decrease of temperature with altitude. The temperature at the upper boundary, the mesopause, is close to -90°C. (Above the mesopause, the temperature once again increases—the thermosphere—reaching values of over 1,000°C at an altitude of about 245 kilometers or 785,000 feet.)

Detailed discussions of the characteristics of the atmosphere at levels above the tropopause may be found in references 3 and 4.

UPPER AIR DATA TO 100,000 FEET

This section contains presentations of upper-air data based on balloon observations made at Point Mugu between 1948 and 1968; at San Nicolas Island between 1953 and 1968; and summarized by the Naval Weather Service Environmental Detachment at the National Climatic Center, Asheville, North Carolina (references 5 and 6).

Although the overall period of record at Point Mugu is longer than at San Nicolas Island, there were far fewer observations made at Point Mugu during this time period. The Point Mugu observations have also been much more sporadic during this period of record than those made at San Nicolas Island. Thus, the San Nicolas Island data are felt to present a more representative picture of conditions over the sea test range, particularly above the first few thousand feet, than do the data from Point Mugu.

The instrumentation system used in these upper-air soundings consisted, for the most part, of the AN/GMD-1 ground equipment and the AN/AMT-4D flight instrument. In more recent years, the AN/GMD-2 ground equipment and the AN/AMQ-9 instrument were used for a number of the soundings. However, there was no attempt to segregate the data obtained with either system. Information regarding the data reliability of these systems may be found in reference 7. Observational procedures have been in accordance with instructions contained in the editions of references 8 and 9 that were current at the time of the observations.

WIND DATA

Winds-Aloft Frequency Profiles

Vertical profiles of the annual and seasonal wind distribution over San Nicolas Island and Point Mugu to 60,000 feet (about 18 kilometers) are shown in figures 1 through 10 and 11 through 20, respectively. These figures provide, first, profiles of the frequency distribution of the scalar wind speed, and then the distributions of the zonal (east-west) and meridional (north-south) components of the mean resultant wind vector. In accordance with standard meteorological practice, the wind components are positive when from the west or south. The seasons are defined as: winter, December through February; spring, March through May; summer, June through August; and autumn, September through November.

In each figure, the mean speed profile is plotted along with profiles of the speed values one standard deviation above and below that mean speed and profiles of the speed values reached in 1, 5, 95, and 99 percent of the observations. These profiles are intended for first-look generalizations and, as such, are presented without great detail for annual and seasonal wind data.

Characteristics of Wind Profiles

At both locations, the annual scalar wind profiles show a general increase of mean wind speed from about 10 knots near the surface to a maximum of about 48 knots near 40,000 feet. Seasonally, the strongest mean winds occur in winter. Located in the height interval between about 35,000 and 40,000 feet, they average about 57 knots. The spring profiles show only a slight decrease from the winter values. In summer, the lowest mean speeds of the year are seen, with the maximum down to about 37 knots. In autumn, the wind speeds begin to increase again with average peak speeds reaching about 45 knots.

The mean zonal winds through 60,000 feet show a strong westerly component during most of the year. The westerlies are strongest in winter and weakest in summer. The greatest variability in the magnitude of the zonal component appears in winter when the otherwise prevailing westerlies are replaced on occasion by winds with an easterly component.

Annually, the mean meridional wind has a weak northerly component to about 30,000 feet and becomes somewhat more southerly above that altitude. Seasonally, the strongest northerly components are seen in winter, but there are stronger southerly components in the winds of summer. As with the zonal component, the variability of the meridional component is greatest in winter as the direction of the wind vector fluctuates with the passage of successive troughs and ridges. The least variability of the meridional component is seen in summer. This is a result of the mid-latitude centers of action moving to the north during this part of the year, replaced by relatively steady west-southwesterly winds from the subtropical Pacific. The spring and autumn profiles exhibit a very weak meridional component at all altitudes, switching from northerly to southerly above about 35,000 feet.

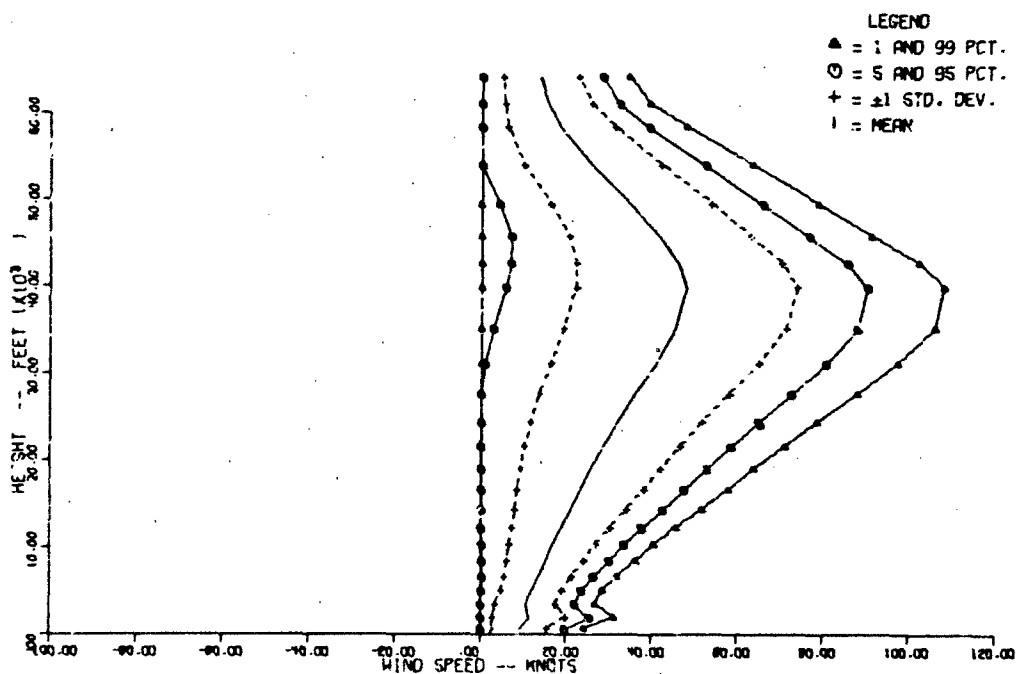


Figure 1. Upper Wind Profiles (Scalar) for San Nicolas Island: Annual.

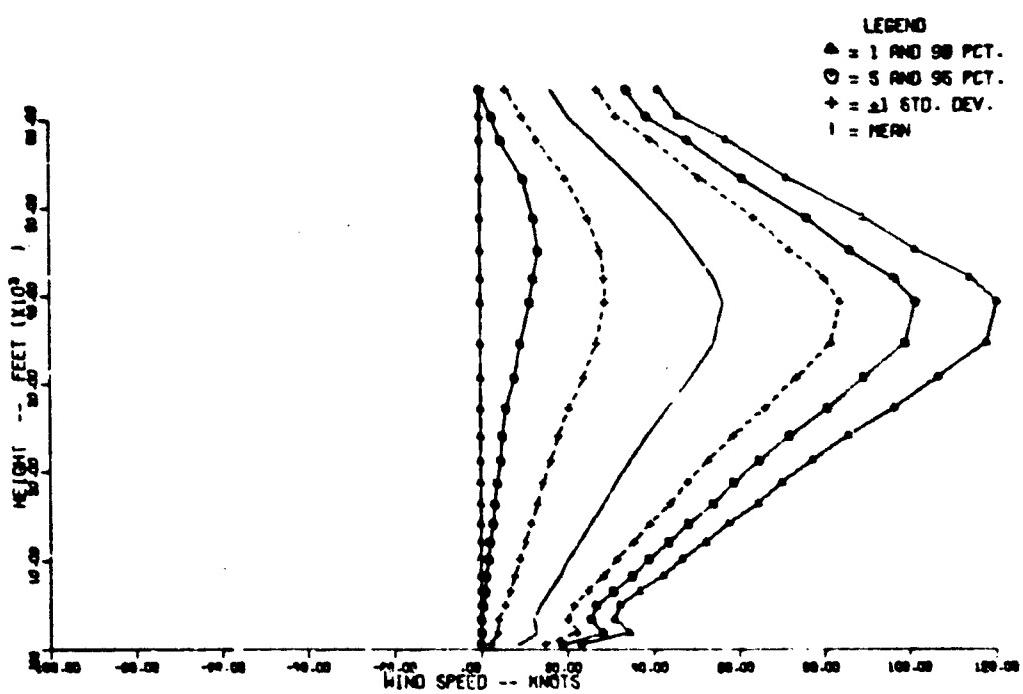


Figure 2. Upper Wind Profiles (Scalar) for San Nicolas Island: Winter.

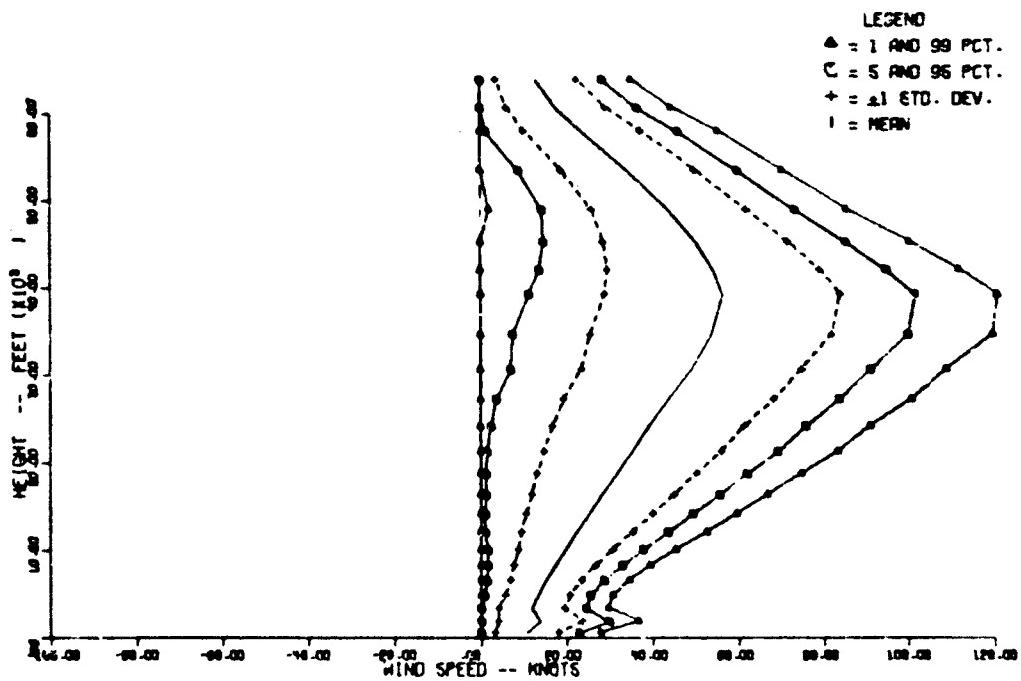


Figure 3. Upper Wind Profiles (Scalar) for San Nicolas Island: Spring.

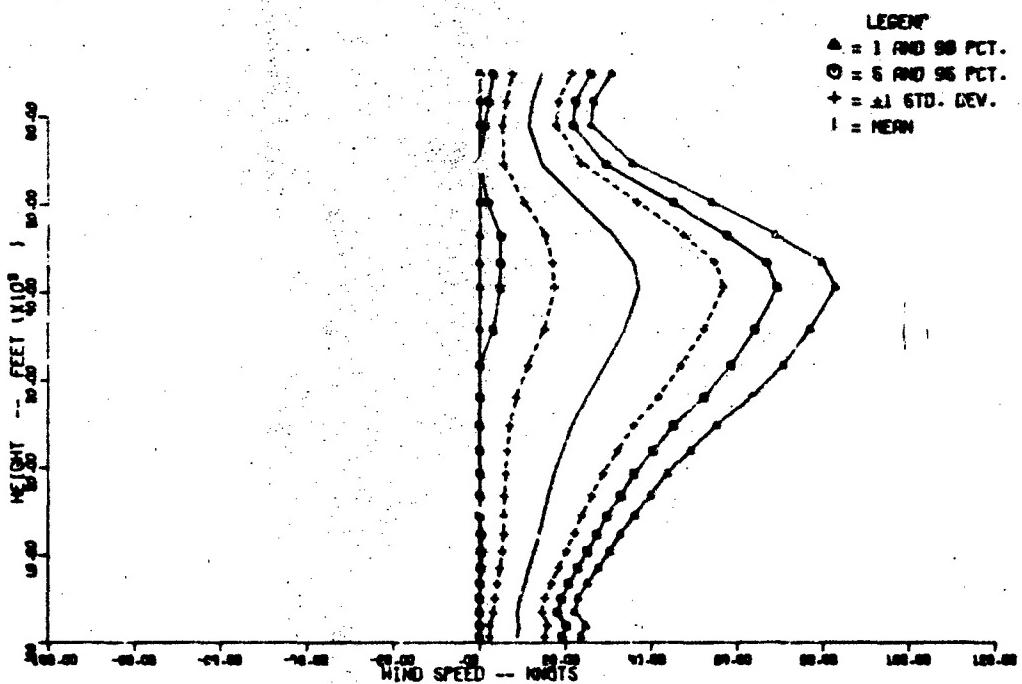


Figure 4. Upper Wind Profiles (Scalari) for San Nicolas Island: Summer.

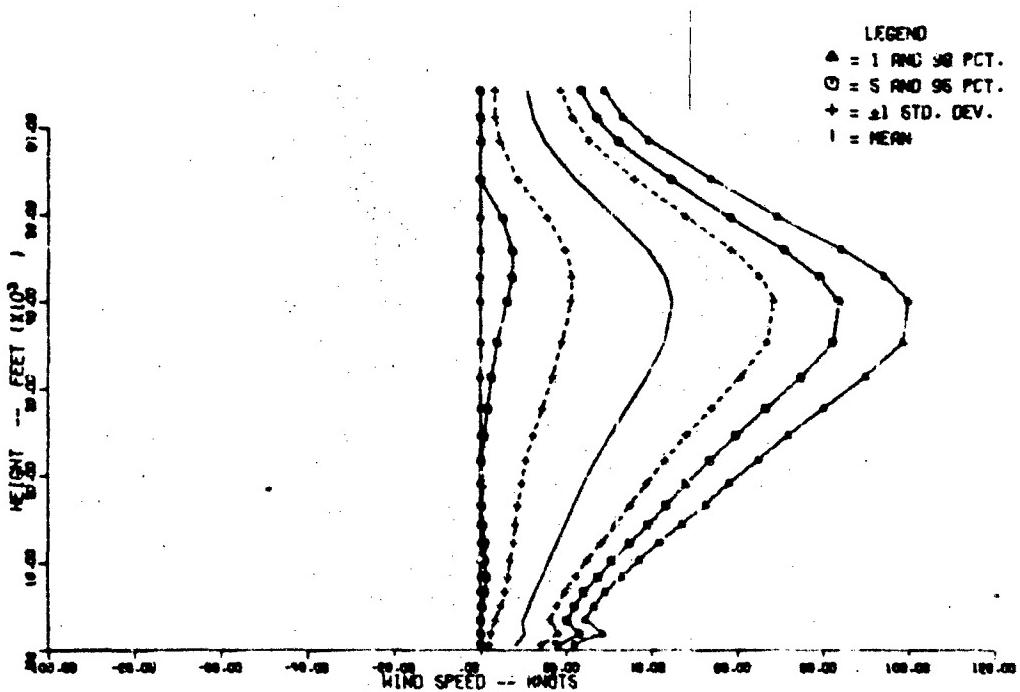
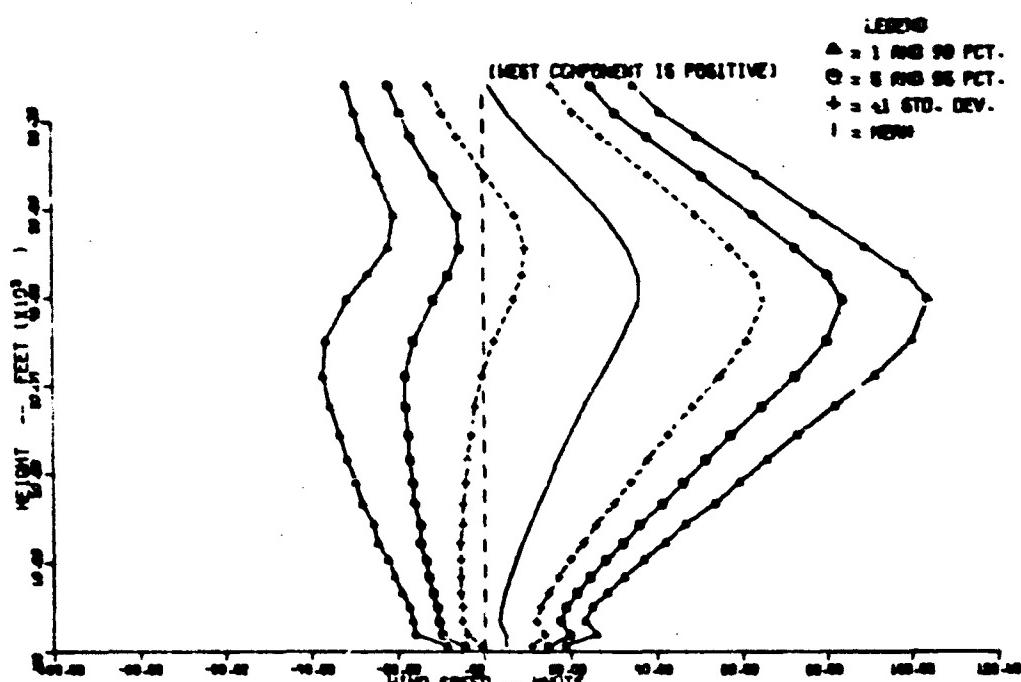
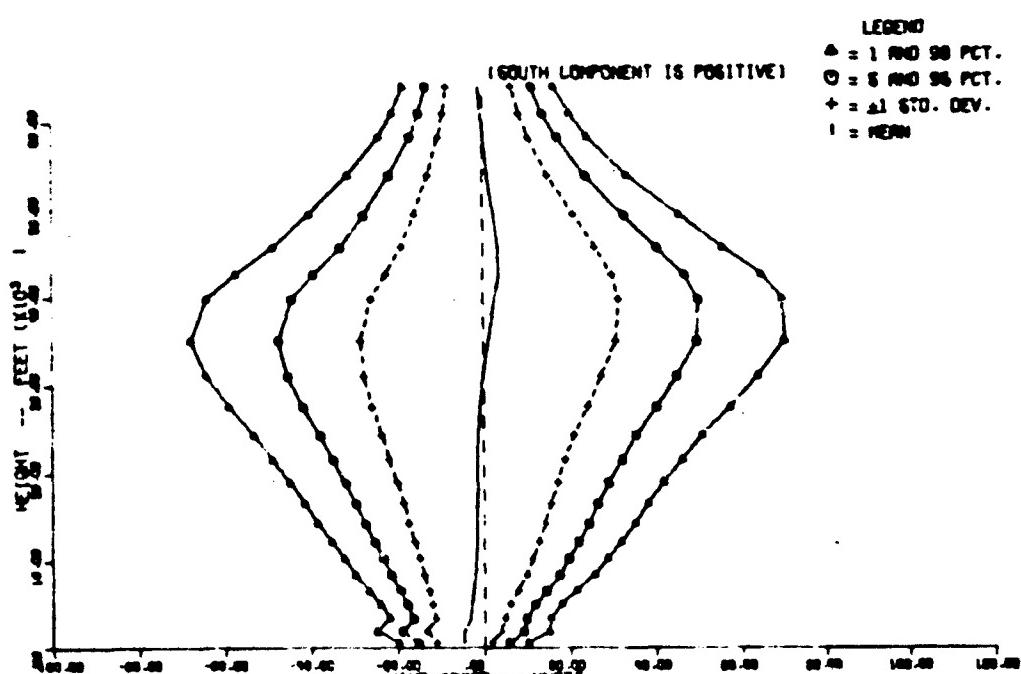


Figure 5. Upper Wind Profiles (Scalari) for San Nicolas Island: Autumn.

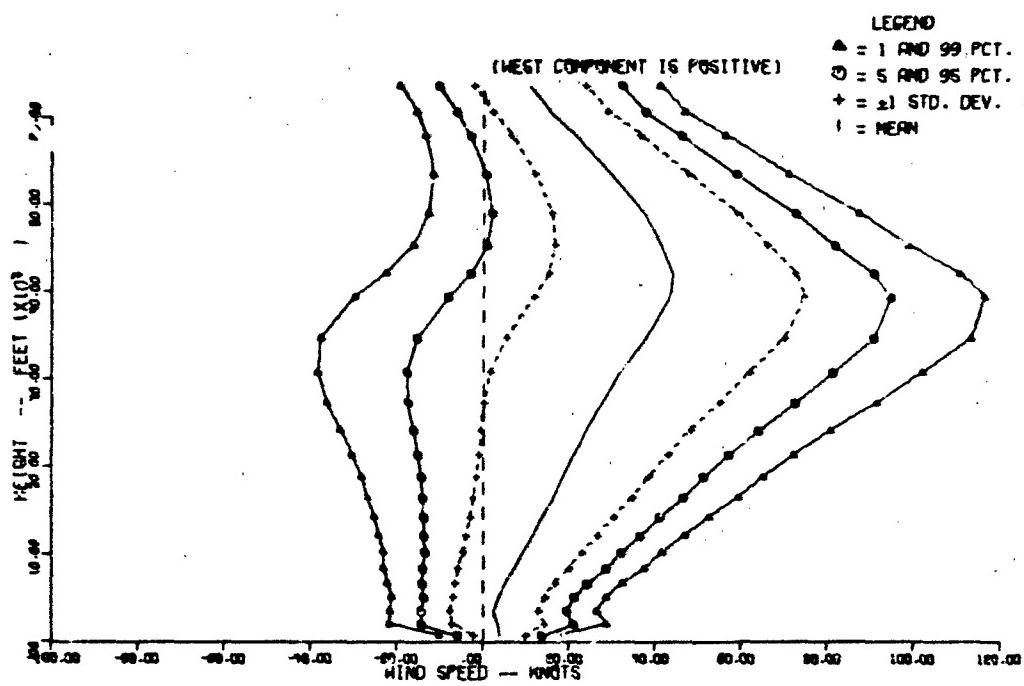


(a) Zonal.

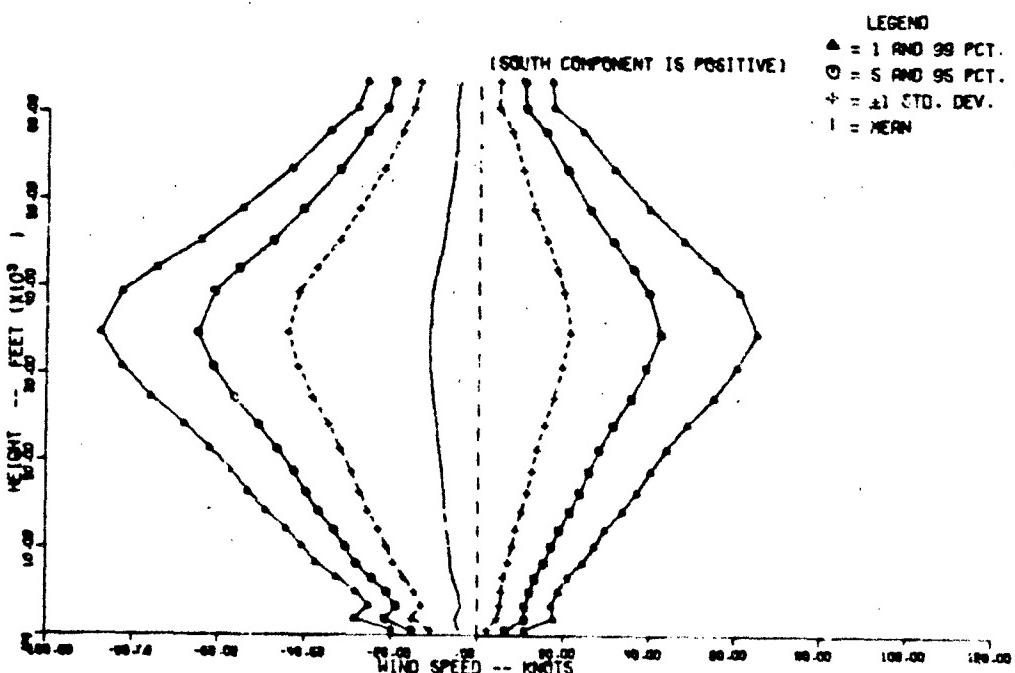


(b) Meridional

Figure 6. Upper Wind Component Profiles for San Nicolas Island: Annual

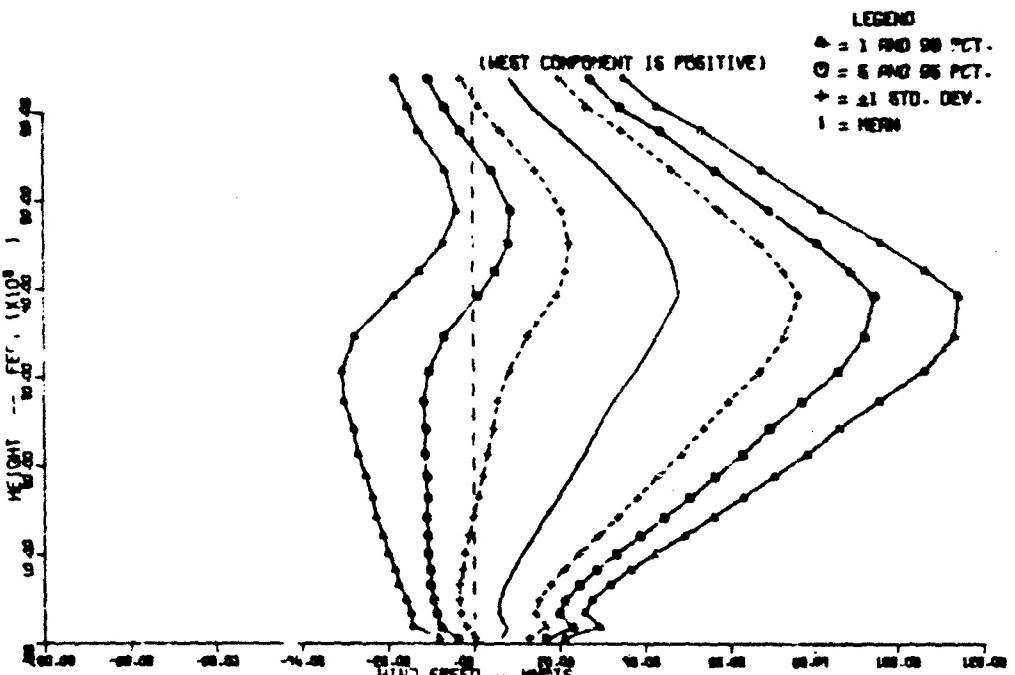


(a) Zonal.

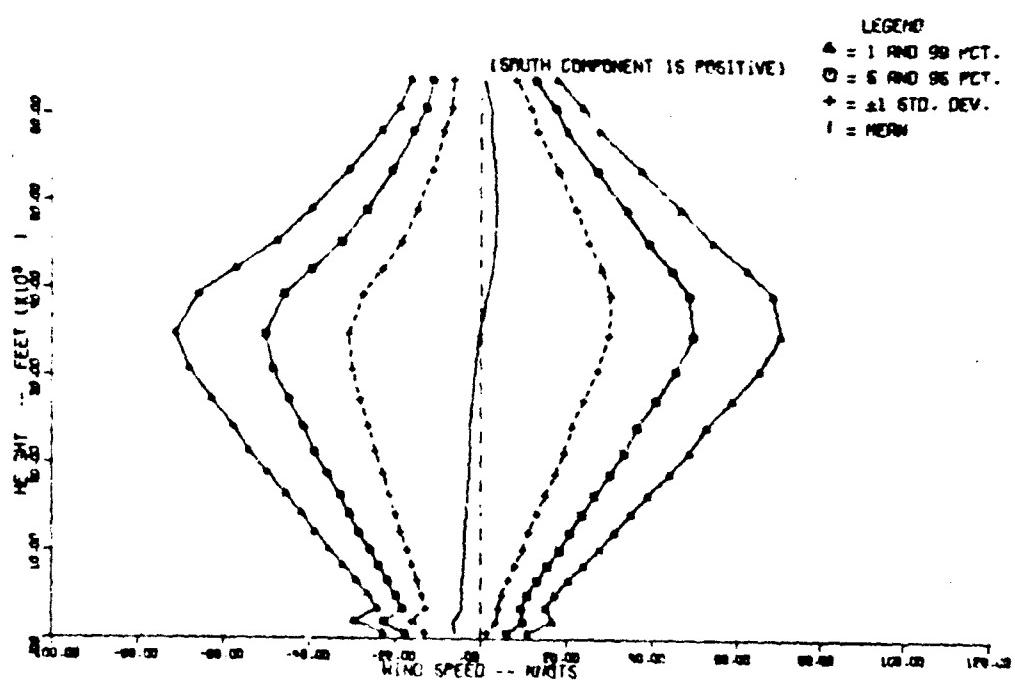


(b) Meridional.

Figure 7. Upper Wind Component Profiles for San Nicolas Island- Winter.

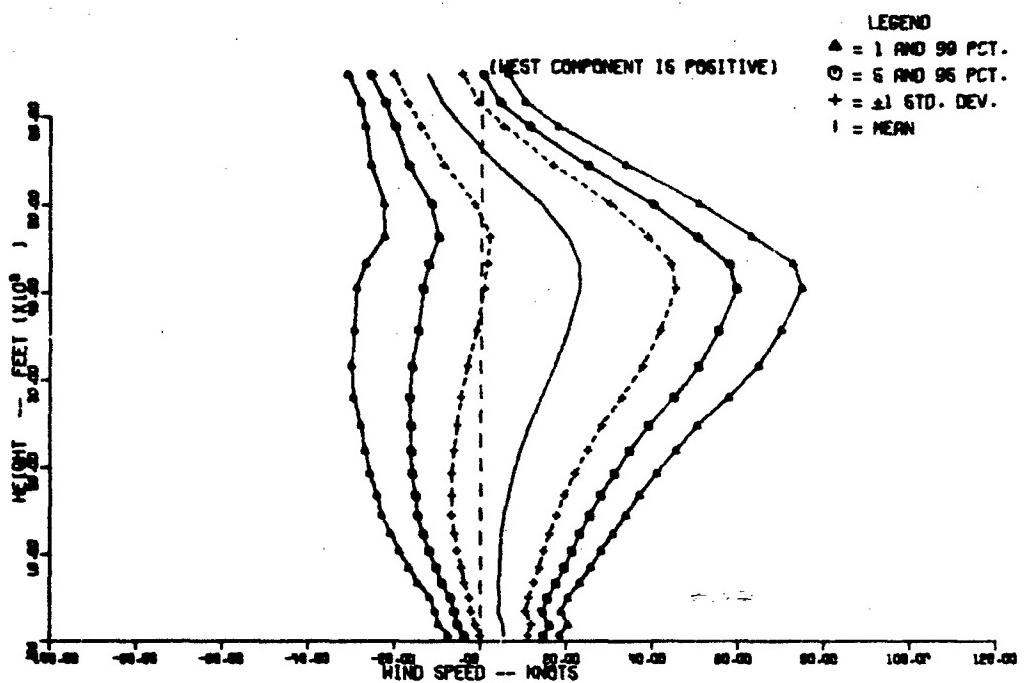


(a) Zonal

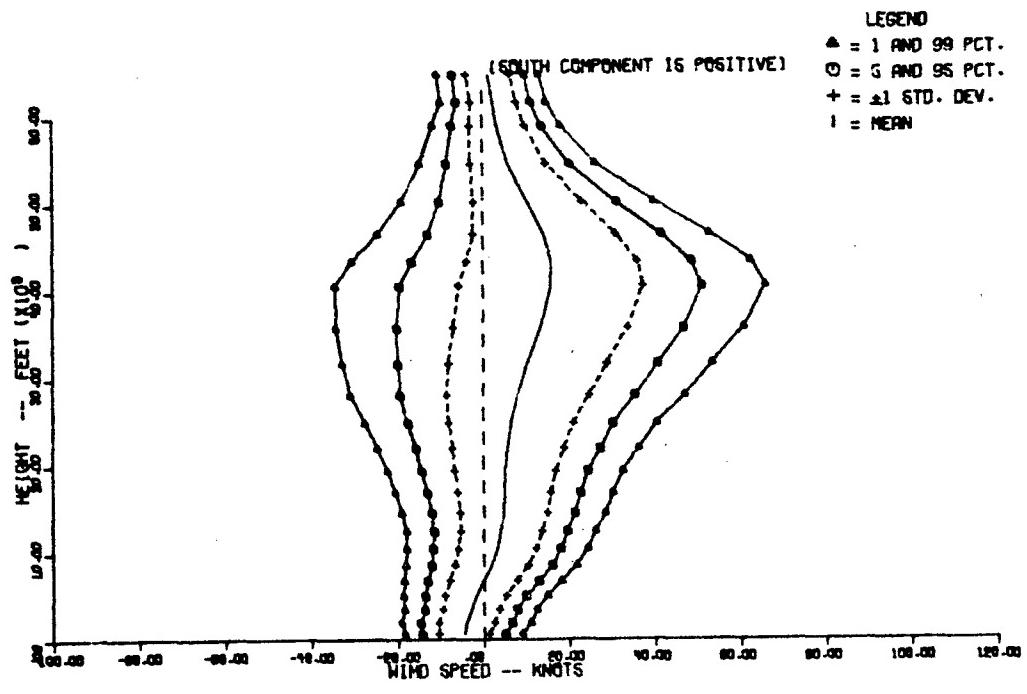


(b) Meridional

Figure 8. Upper Wind Component Profiles for San Nicolas Island Spring.

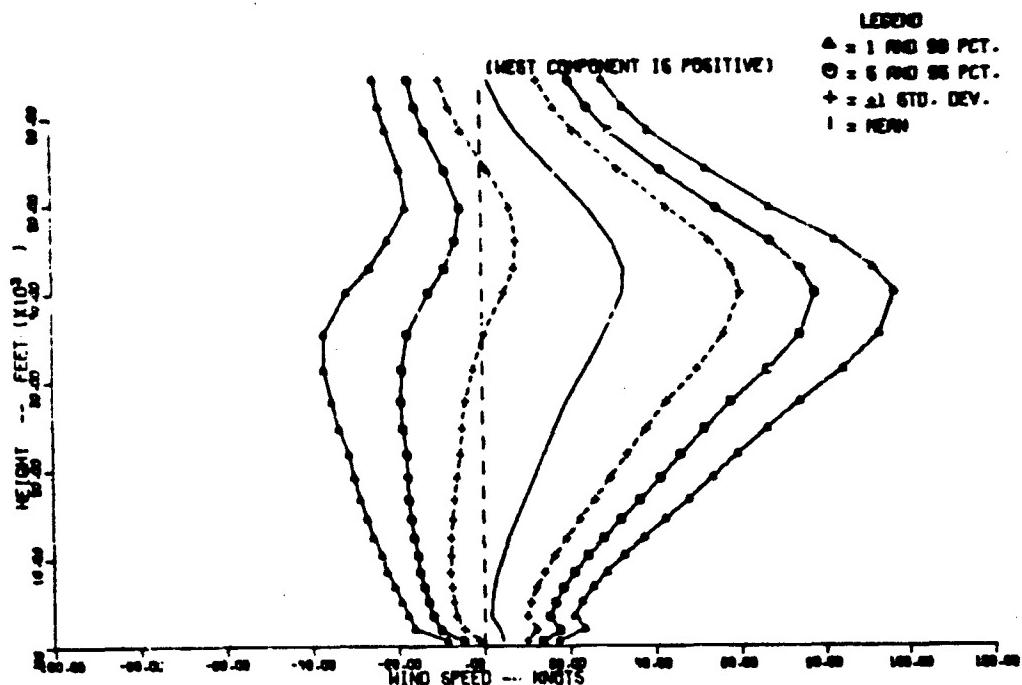


(a) Zonal.

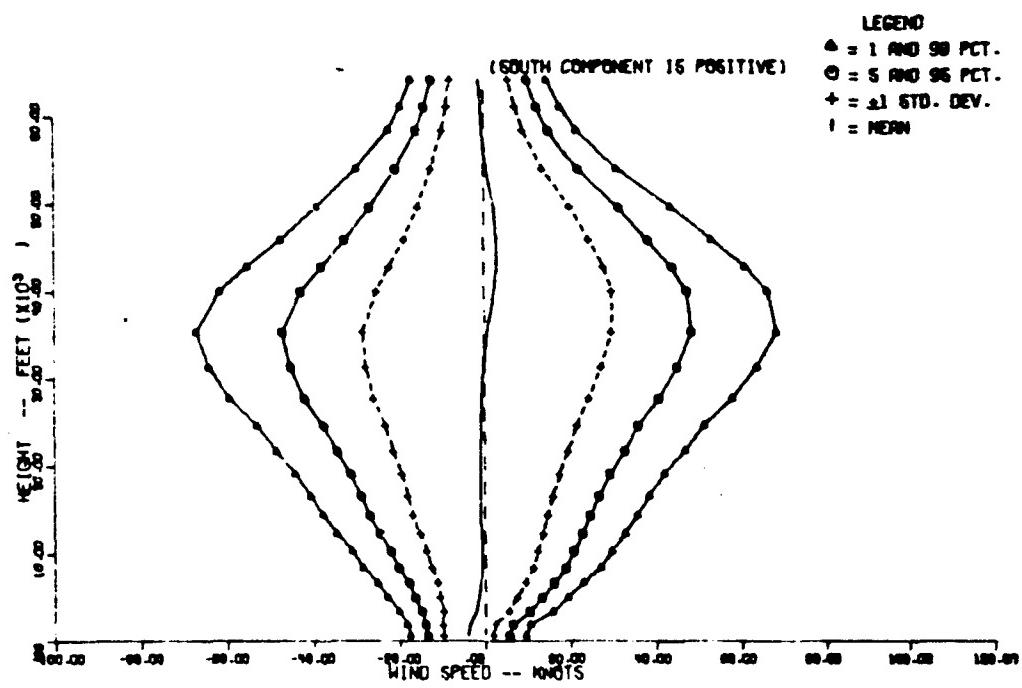


(b) Meridional.

Figure 9. Upper Wind Component Profiles for San Nicolas Island: Summer.



(a) Zonal.



(b) Meridional.

Figure 10. Upper Wind Component Profiles for San Nicolas Island: Autumn.

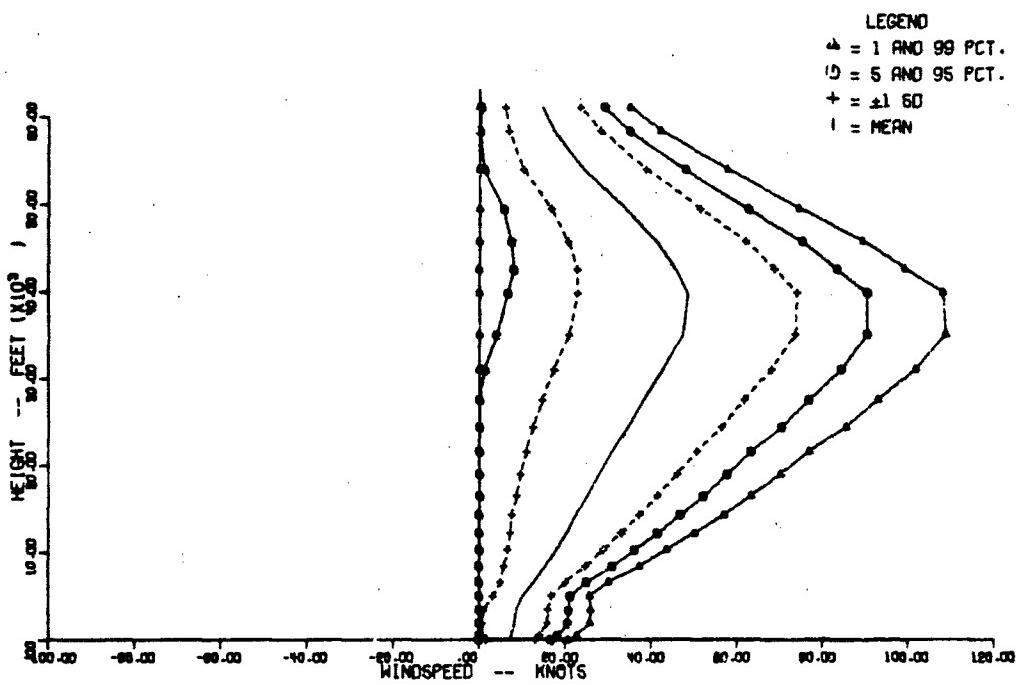


Figure 11. Upper Wind Profiles (Scalar) for Point Mugu, California: Annual.

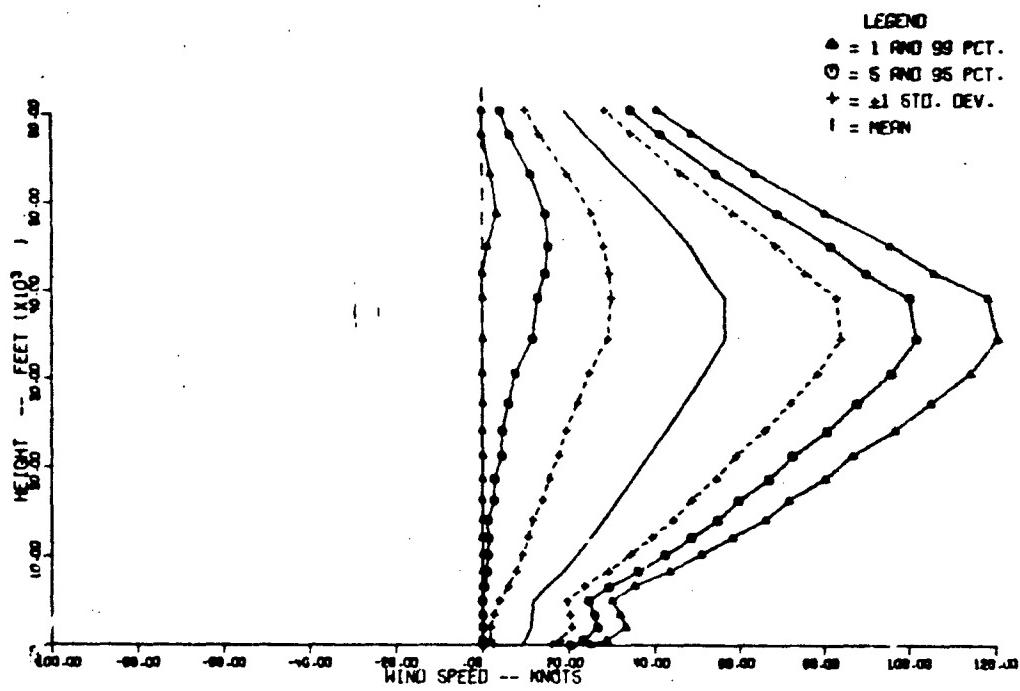


Figure 12. Upper Wind Profiles (Scalar) for Point Mugu, California: Winter.

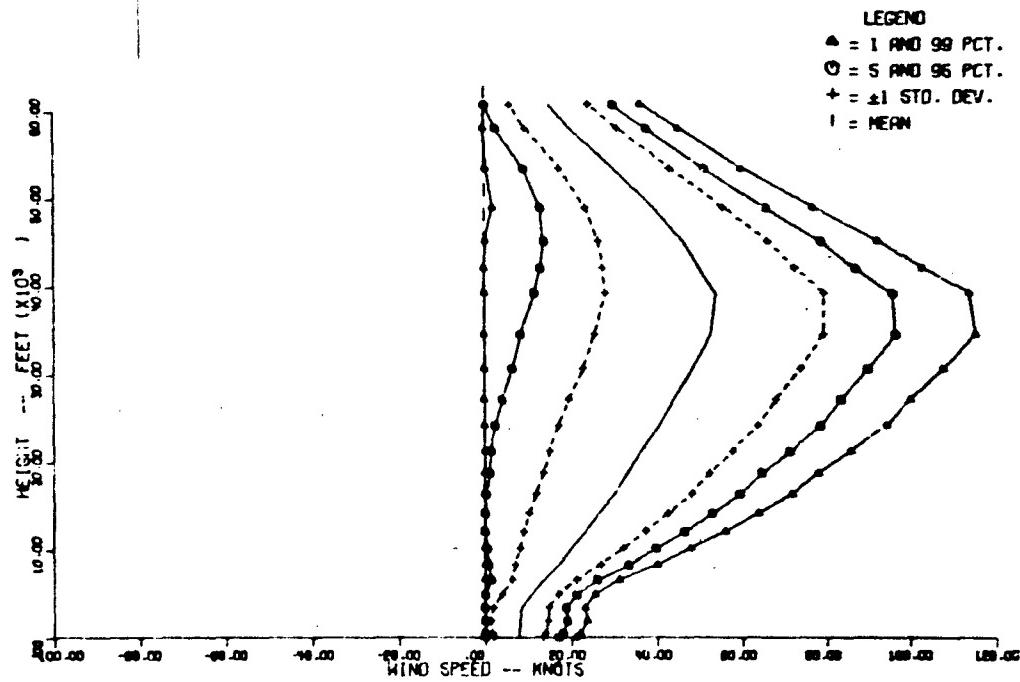


Figure 13. Upper Wind Profiles (Scalar) for Point Mugu, California: Spring.

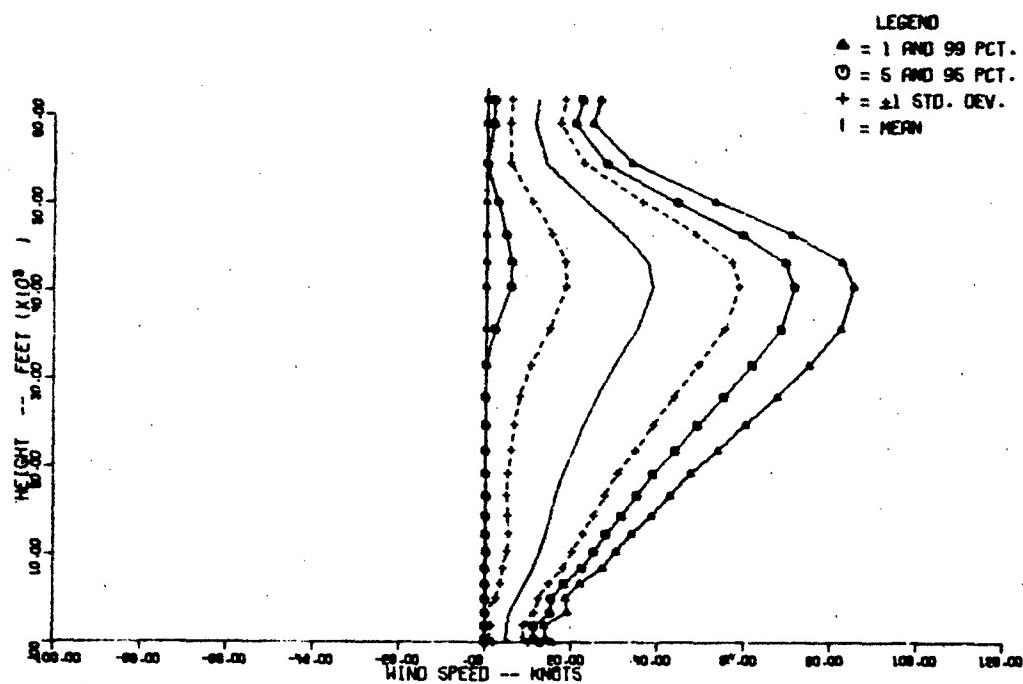


Figure 14. Upper Wind Profiles (Scalar) for Point Mugu, California: Summer.

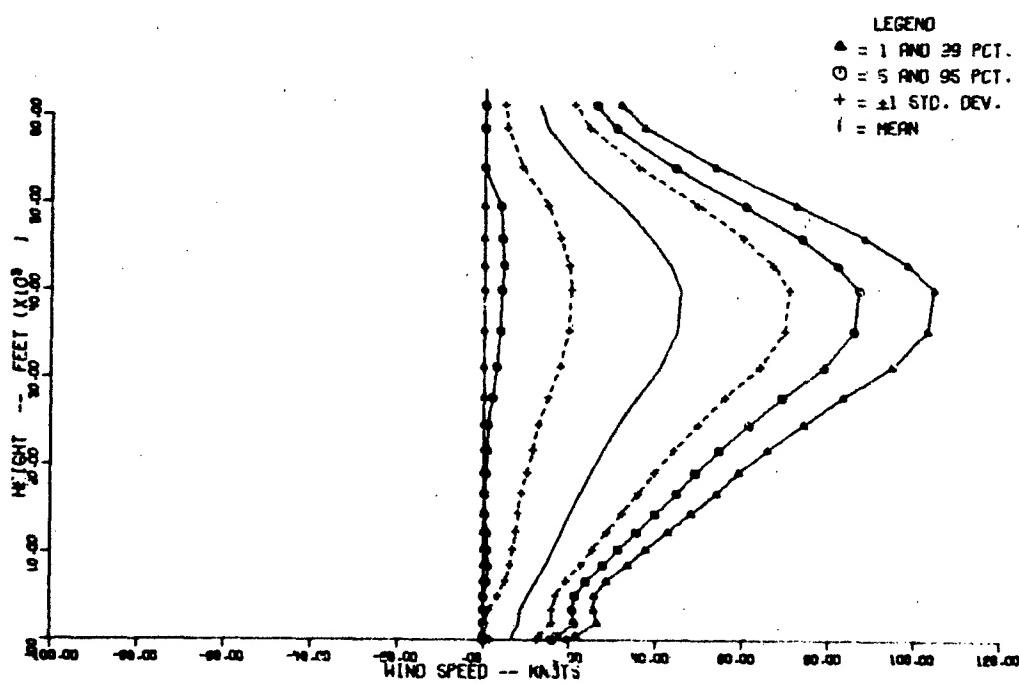
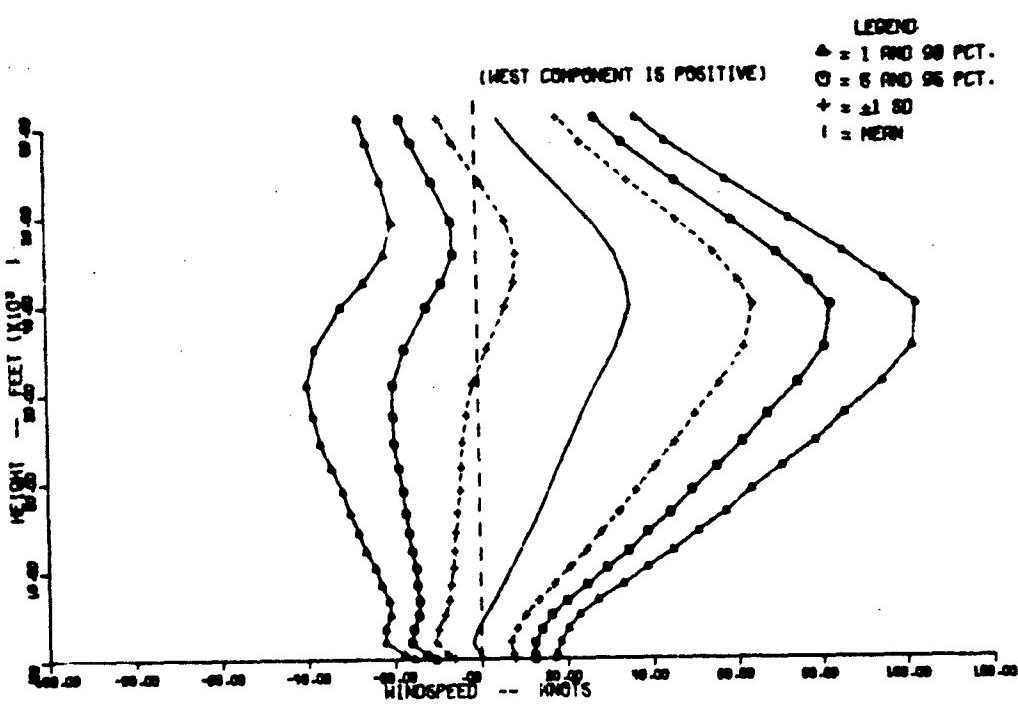
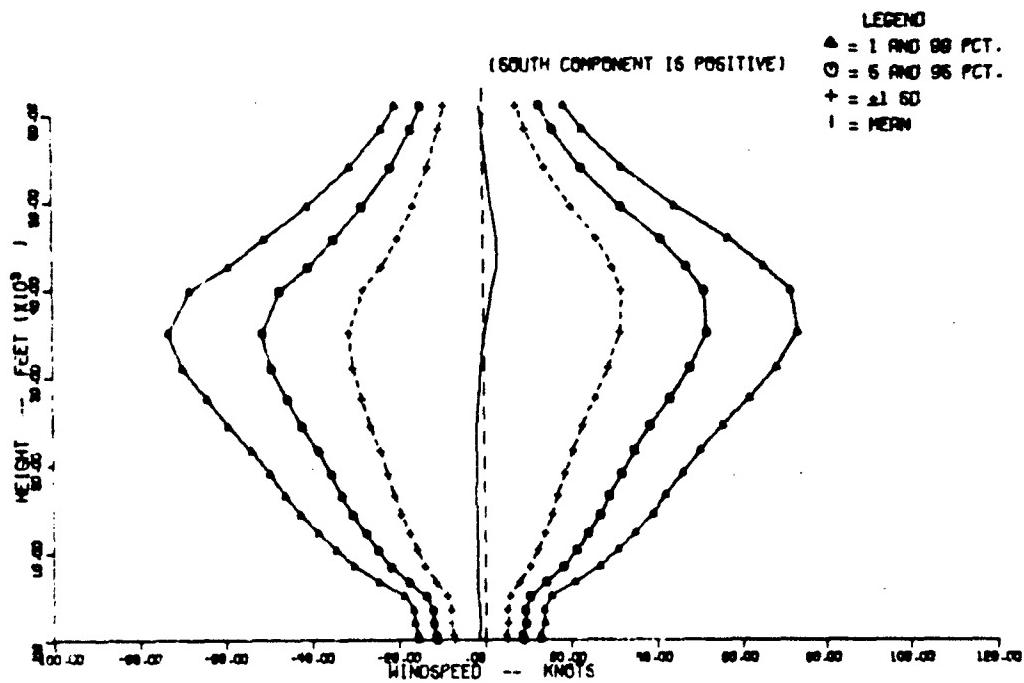


Figure 15. Upper Wind Profiles (Scalar) for Point Mugu, California: Autumn.

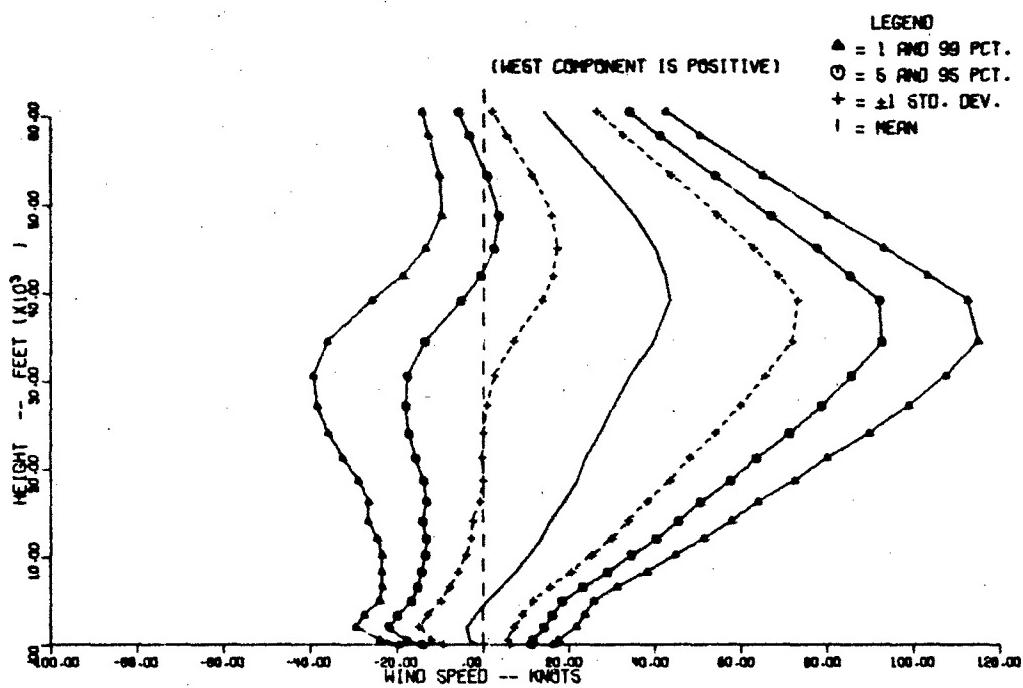


(a) Zonal.

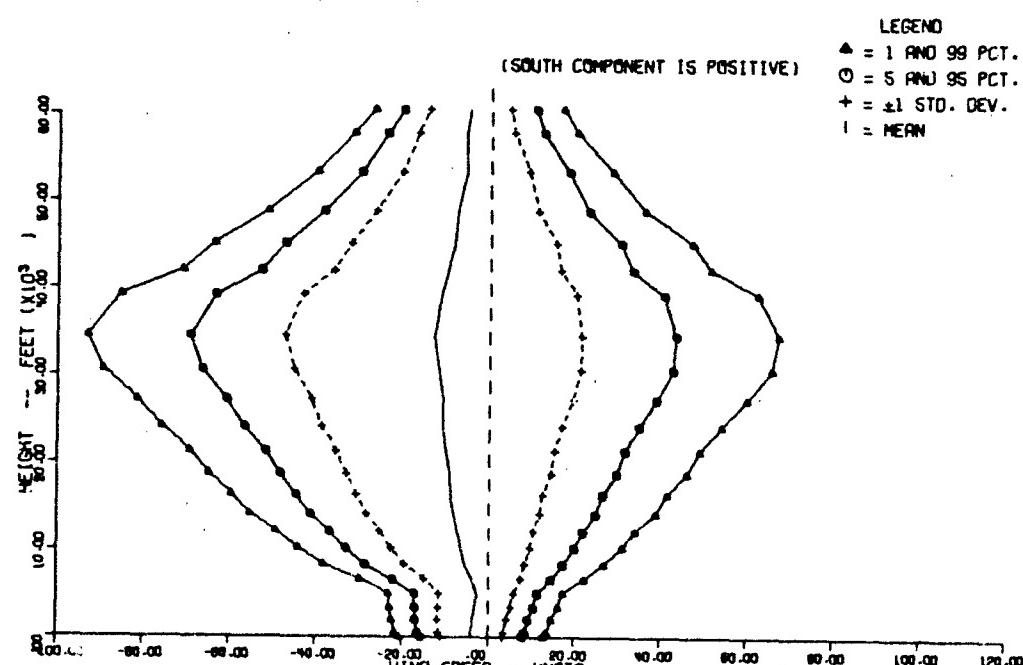


(b) Meridional.

Figure 16. Upper Wind Component Profiles for Point Mugu, California: Annual.

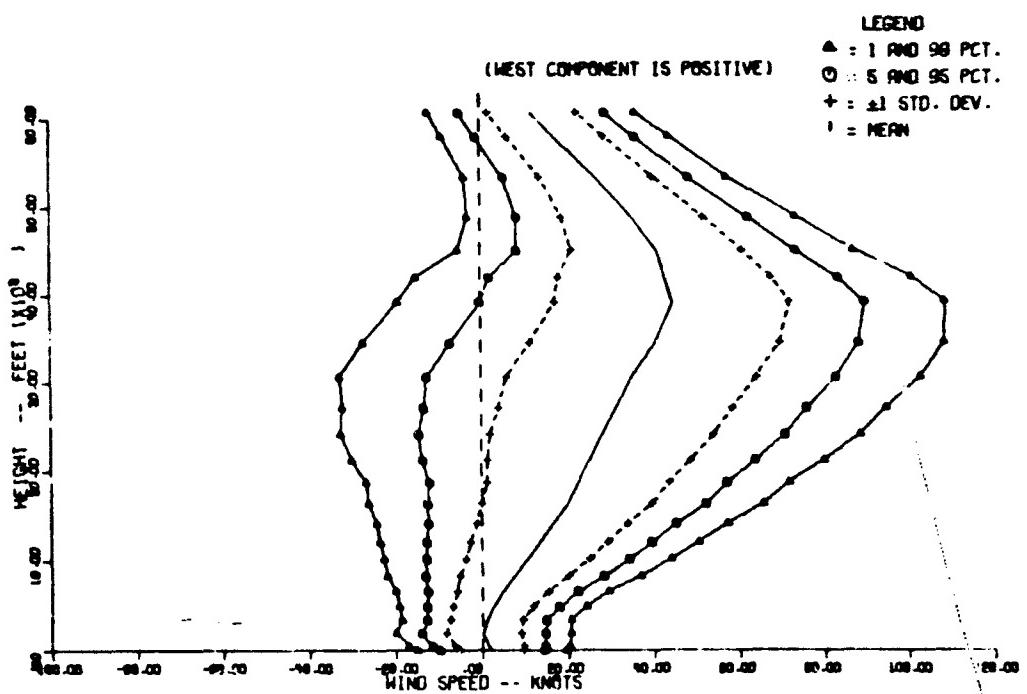


(a) Zonal.

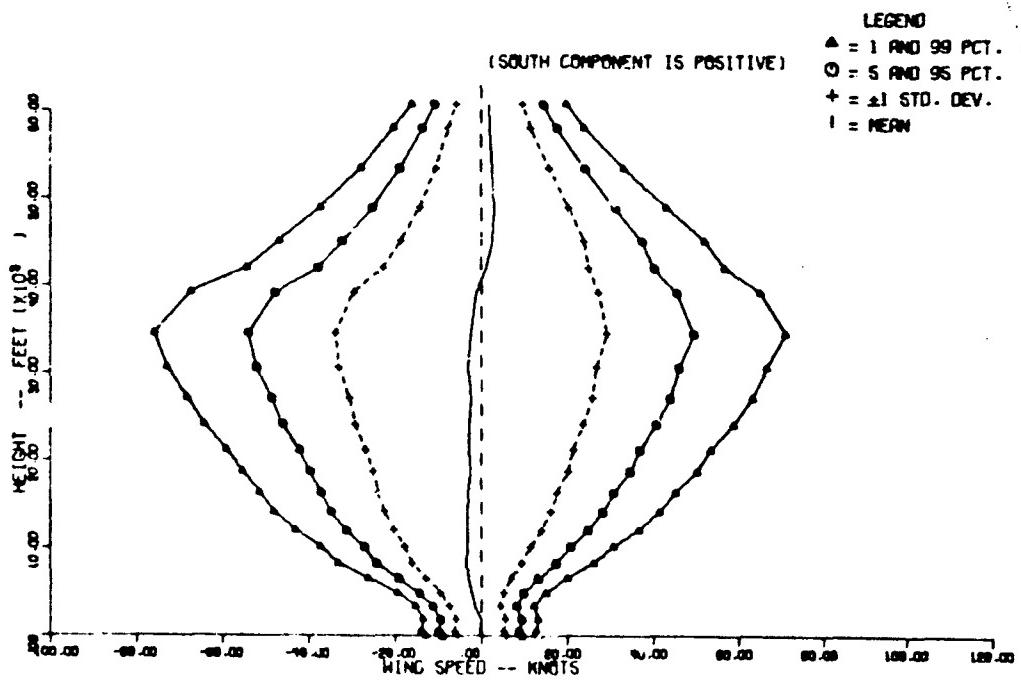


(b) Meridional.

Figure 17. Upper Wind Component Profiles for Point Mugu, California: Winter.



(a) Zonal.



(b) Meridional

Figure 18 Upper Wind Component Profiles for Point Mugu, California: Spring.

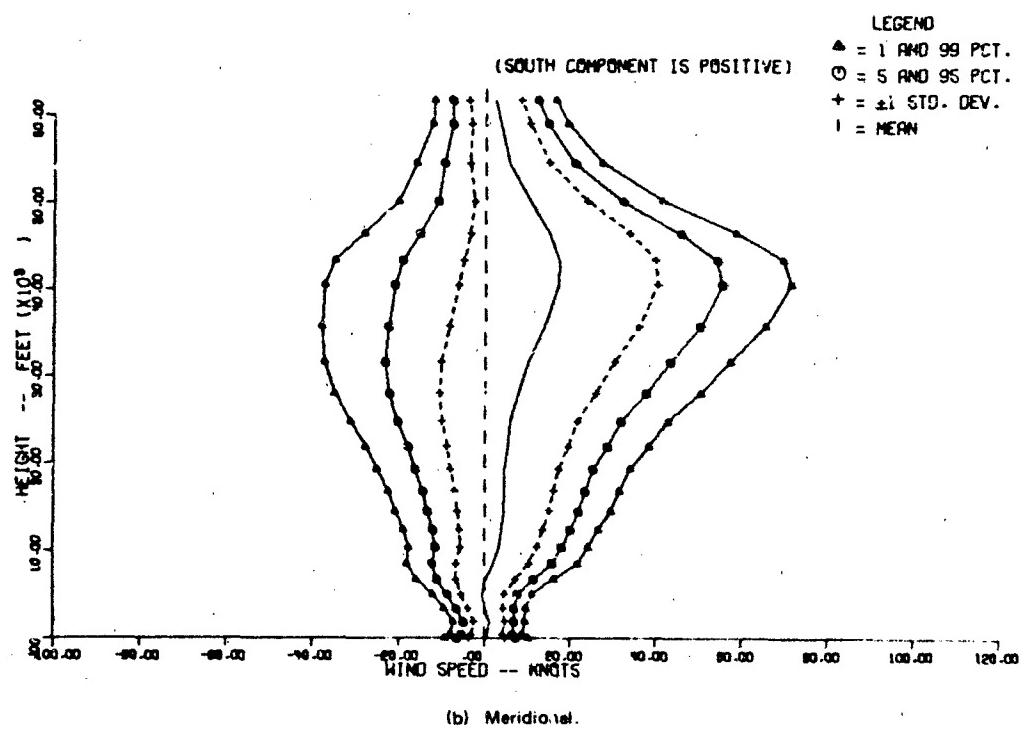
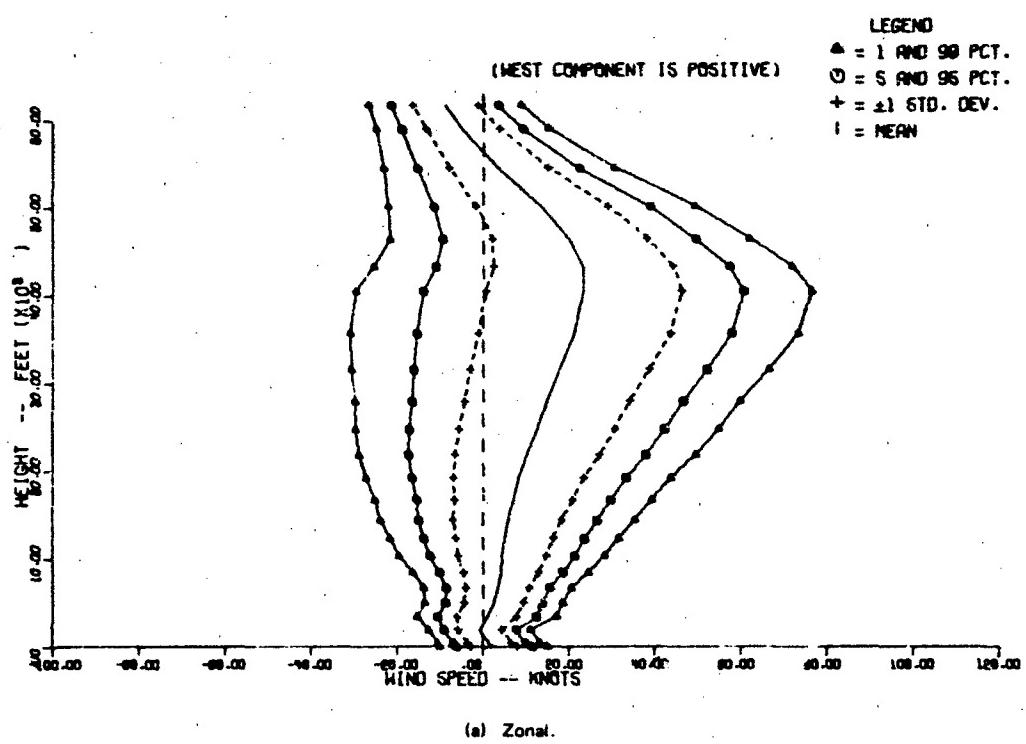
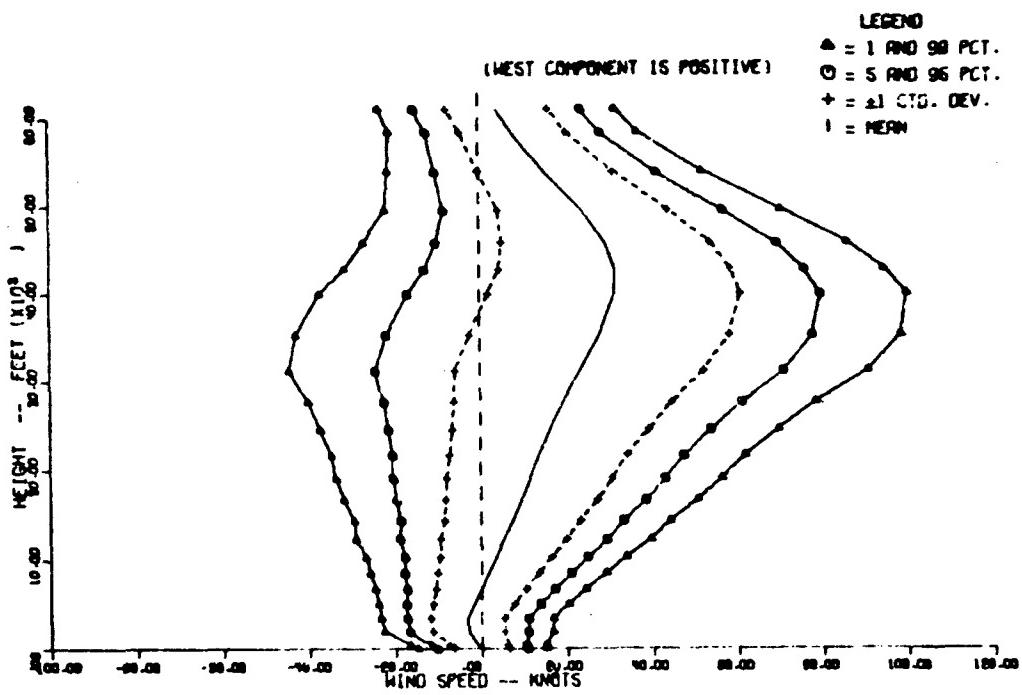
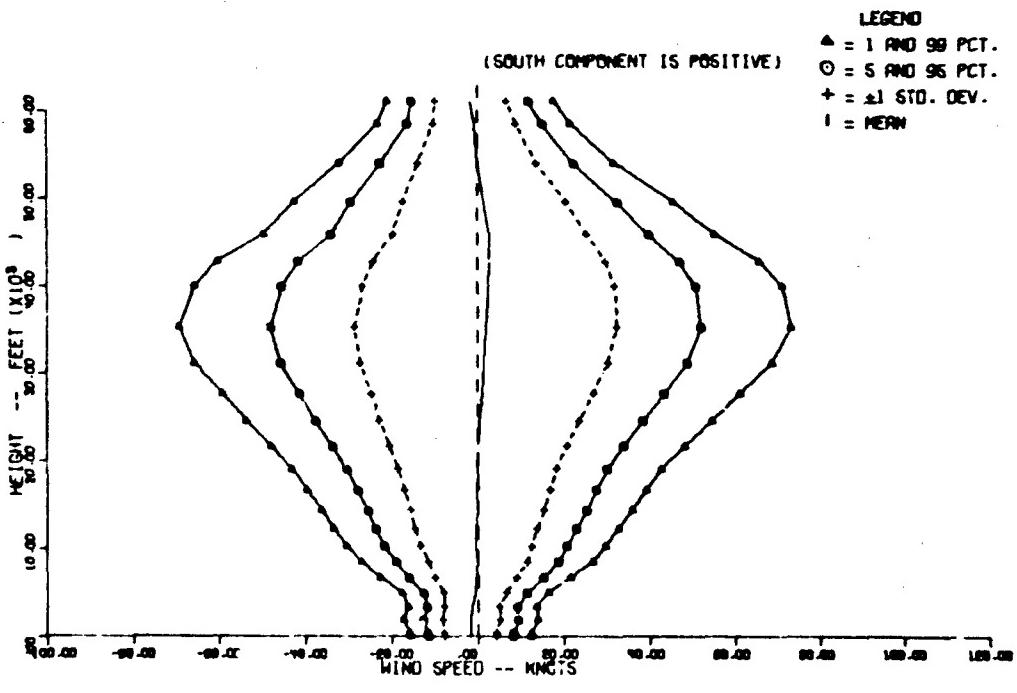


Figure 19. Upper Wind Component Profiles for Point Mugu, California: Summer.



(a) Zonal.



(b) Meridional.

Figure 20. Upper Wind Component Profiles for Point Mugu, California: Autumn.

Cumulative Frequency Distributions

Much more detailed tabular listings of wind distribution data, including monthly, annual, and seasonal compilations, are provided in tables 2 through 52 for San Nicolas Island and in tables 53 through 103 for Point Mugu. The San Nicolas Island data are given to the 10-millibar level (about 102,000 feet or 31 kilometers) and those for Point Mugu to the 70-millibar level (about 61,000 feet or 18 kilometers). In each table the wind data are presented at the standard pressure levels (see table 104 for a listing of these with their Standard Atmosphere heights) with the mean height of the level for the month or season concerned. The wind data are in the form of a cumulative frequency distribution at 1-, 5-, 10-, 25-, 50-, 75-, 90-, and 99-percent levels of occurrence, in addition to the values at ± 1 and ± 2 standard deviations from the mean (50 percent level). There are three tables for each month or season: one for the scalar wind-speed distribution and two for the components of the mean resultant wind vector.

Two limitations should be kept in mind when using these data. The first deals with winds at the jet stream level. Because these wind data are provided for standard pressure levels only, the level of maximum winds—the jet stream—cannot be positioned precisely in altitude. This level will often occur between the standard pressure levels, and so only a zone within which the jet stream will most likely be found can be determined. For instance, in figures 1 through 5, it can be seen to occur most likely in the region between 35,000 and 45,000 feet. The value of the mean speed at these heights cannot be taken as representative of jet stream wind speeds. Rather, the 95- or 99-percent speed value might be a more likely indicator of those speeds.

The second limitation concerns wind shear. Normal observational procedures and the recognized limitations of the conventional rawinsonde equipment used for observing upper-level winds, when combined with the relatively large vertical spacing of the available data, have effectively masked out small-scale wind shears and have smoothed larger scale shears significantly. It is quite possible that maximum shears several times greater than those implied by the data presented here are possible. Thus caution should be exercised in any attempt to infer wind shear data from these profiles and tables.

Table 2. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: Annual

NO. OBSERVATIONS -- SURFACE = 6840. TOP = 4870

PRESSURE LEVEL (INPS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)									
		1.0 -150	2.0 -250	5.0 -100	10.0 -150	15.0 -150	25.0 -150	50.0 -150	75.0 -150	100.0 -150	150.0 -150
SFC	571	0	0	0	0	0	0	0	0	0	0
950	1460	0	0	0	0	0	0	0	0	0	0
900	3346	0	0	0	0	0	0	0	0	0	0
850	4951	0	0	0	0	0	0	0	0	0	0
800	6617	0	0	0	0	0	0	0	0	0	0
750	8376	0	0	0	0	0	0	0	0	0	0
700	10236	0	0	0	0	0	0	0	0	0	0
650	12201	0	0	0	0	0	0	0	0	0	0
600	14304	0	0	0	0	0	0	0	0	0	0
550	16535	0	0	0	0	0	0	0	0	0	0
500	18957	0	0	0	0	0	0	0	0	0	0
450	21558	0	0	0	0	0	0	0	0	0	0
400	24416	0	0	0	0	0	0	0	0	0	0
350	27556	0	0	0	0	0	0	0	0	0	0
300	31046	0	0	0	0	0	0	0	0	0	0
250	35049	0	0	0	0	0	0	0	0	0	0
200	39790	0	0	0	0	0	0	0	0	0	0
175	42552	0	0	0	0	0	0	0	0	0	0
150	45709	0	0	0	0	0	0	0	0	0	0
125	49393	0	0	0	0	0	0	0	0	0	0
100	53855	0	0	0	0	0	0	0	0	0	0
80	58314	0	0	0	0	0	0	0	0	0	0
70	61011	0	0	0	0	0	0	0	0	0	0
60	64124	0	0	0	0	0	0	0	0	0	0
50	67854	0	0	0	0	0	0	0	0	0	0
40	72470	0	0	0	0	0	0	0	0	0	0
30	7949	0	0	0	0	0	0	0	0	0	0
25	82362	0	0	0	0	0	0	0	0	0	0
20	87133	0	0	0	0	0	0	0	0	0	0
15	93369	0	0	0	0	0	0	0	0	0	0
10	102293	0	0	0	0	0	0	0	0	0	0

Table 3. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Annual
NO. OBSERVATIONS -- SURFACE = 88400. TOP = 4870

PRESSURE LEVEL (INBS)	MEAN HEIGHT (FT)	1.0			2.2P			5.0			10.0			15.87			25.0			ZONAL WIND SPEED (KNOTS)							
		-100	-250	-500	-150	-100	-250	-500	-150	-100	-250	-500	-150	-100	-250	-500	-150	MEAN	+1SD	-1SD	MEAN	+1SD	-1SD				
SFC	571	-8.7	-6.4	-4.7	-2.6	-0.9	1.0	5.0	9.0	10.4	12.6	14.7	16.8	18.7	16.8	14.7	12.6	10.4	9.0	5.0	1.0	-0.9	-2.6	-4.7	-6.4	-8.7	
950	1640	-16.1	-13.1	-9.9	-6.6	-4.1	-1.1	4.9	10.9	13.9	16.4	19.7	22.9	25.9	22.9	19.7	16.4	13.9	10.9	4.9	1.1	-4.1	-6.6	-9.9	-13.1	-16.1	
900	3356	-13.6	-10.6	-7.6	-5.2	-3.2	-1.4	3.4	9.2	12.0	14.4	17.5	20.6	23.6	23.6	20.6	17.5	14.4	12.0	9.2	3.4	1.4	-3.2	-5.2	-7.6	-10.6	-13.6
850	4952	-17.4	-14.4	-11.1	-7.8	-5.3	-2.3	3.6	9.9	12.9	15.4	18.7	22.0	25.0	25.0	22.0	18.7	15.4	12.9	9.9	3.6	1.4	-5.3	-7.8	-11.1	-14.4	-17.4
800	6617	-19.2	-15.4	-12.1	-8.5	-6.0	-3.2	4.6	11.4	14.4	17.7	21.3	25.0	28.0	28.0	25.0	21.3	17.7	14.4	11.4	4.6	1.4	-6.0	-8.5	-12.1	-15.4	-19.2
750	8376	-20.9	-17.1	-13.0	-9.9	-7.7	-4.7	5.7	12.3	17.1	20.3	26.4	32.3	36.7	36.7	32.3	26.4	20.3	17.1	12.3	5.7	1.7	-7.7	-9.9	-13.0	-17.1	-20.9
700	10236	-22.6	-18.3	-13.7	-9.2	-7.5	-4.4	7.1	15.6	19.8	23.4	27.9	32.5	36.7	36.7	32.5	27.9	23.4	19.8	15.6	7.1	1.4	-7.5	-9.2	-13.7	-18.3	-22.6
650	12201	-24.4	-19.9	-14.8	-9.6	-7.6	-4.6	8.7	16.3	23.0	27.0	32.2	37.3	42.0	42.0	37.3	32.2	27.0	23.0	16.3	8.7	1.4	-7.6	-9.6	-14.8	-19.9	-24.4
600	14304	-25.6	-20.5	-14.9	-9.3	-7.5	-4.1	10.5	20.9	26.0	30.3	35.9	41.5	46.6	46.6	41.5	35.9	30.3	26.0	20.9	10.5	1.4	-7.5	-9.3	-14.9	-20.5	-25.6
550	16535	-28.3	-22.5	-16.2	-10.9	-8.5	-5.8	12.5	20.2	26.0	30.0	34.9	41.2	47.5	47.5	41.2	34.9	30.0	26.0	20.2	12.5	1.4	-8.5	-10.9	-16.2	-22.5	-28.3
500	18947	-29.4	-23.5	-16.6	-10.7	-8.4	-5.9	14.9	21.7	27.5	33.4	39.1	46.0	52.9	52.9	46.0	39.1	33.4	27.5	21.7	14.9	1.4	-8.4	-10.7	-16.6	-23.5	-29.4
450	21558	-31.7	-24.8	-17.3	-10.8	-8.3	-5.0	17.0	21.0	27.5	33.0	43.8	51.3	58.8	58.8	51.3	43.8	33.0	27.5	21.0	17.0	1.4	-8.3	-10.8	-17.3	-24.8	-31.7
400	24416	-33.4	-25.6	-17.7	-10.5	-8.1	-5.1	19.1	23.0	30.0	42.5	48.9	56.1	65.3	65.3	56.1	48.9	30.0	23.0	19.1	1.4	-8.1	-10.5	-17.7	-25.6	-33.4	
350	27556	-35.7	-27.4	-18.3	-10.3	-7.2	-4.4	20.4	23.0	30.0	40.0	46.9	55.3	65.3	65.3	55.3	46.9	30.0	23.0	20.4	1.4	-7.2	-10.3	-18.3	-27.4	-35.7	
300	31066	-37.2	-28.1	-18.2	-10.2	-7.0	-4.5	21.2	23.0	30.0	40.0	47.4	55.3	65.3	65.3	55.3	47.4	30.0	23.0	21.2	1.4	-7.0	-10.2	-18.2	-28.1	-37.2	
250	35069	-36.7	-27.0	-16.5	-9.5	-6.5	-4.6	21.4	24.5	30.0	40.0	47.5	55.3	65.3	65.3	55.3	47.5	30.0	24.5	21.4	1.4	-6.5	-9.5	-16.5	-27.0	-36.7	
200	39770	-31.7	-22.5	-11.7	-7.7	-5.2	-3.2	24.9	27.5	33.4	43.8	51.3	60.9	70.3	70.3	60.9	51.3	33.4	27.5	24.9	1.4	-3.2	-5.2	-7.7	-11.7	-31.7	
175	42552	-26.6	-17.9	-10.2	-5.2	-3.5	-1.5	9.0	11.9	15.0	19.3	23.9	28.8	34.9	34.9	28.8	19.3	15.0	11.9	9.0	1.4	-1.5	-3.5	-5.2	-10.2	-17.9	
150	45709	-22.1	-14.2	-5.6	-2.9	-2.9	-0.5	13.4	17.1	21.4	26.1	31.4	37.2	43.9	43.9	37.2	26.1	21.4	17.1	13.4	1.4	-0.5	-2.9	-5.6	-14.2	-22.1	
125	49393	-20.6	-13.9	-6.3	-3.2	-1.2	-0.1	16.0	20.1	26.1	31.4	37.2	43.9	50.6	50.6	43.9	31.4	26.1	20.1	16.0	1.4	-0.1	-1.2	-3.2	-6.3	-13.9	
100	53855	-26.5	-18.3	-11.5	-6.7	-4.7	-2.6	19.5	23.2	28.4	35.2	43.1	50.5	57.3	57.3	50.5	43.1	35.2	28.4	23.2	19.5	1.4	-2.6	-4.7	-6.7	-11.5	-18.3
80	58314	-28.3	-22.6	-16.8	-10.8	-7.6	-4.6	20.6	24.1	28.0	35.0	42.1	49.5	56.0	56.0	49.5	42.1	35.0	28.0	24.1	1.4	-4.6	-7.6	-10.8	-16.8	-28.3	
70	61001	-29.6	-24.4	-19.1	-13.7	-9.4	-6.4	24.4	27.3	32.1	39.7	46.1	53.7	60.9	60.9	53.7	46.1	39.7	32.1	27.3	1.4	-6.4	-9.4	-13.7	-19.1	-29.6	
60	64124	-31.7	-27.0	-21.8	-16.7	-12.7	-8.0	26.0	29.0	35.0	42.0	49.0	56.0	63.0	63.0	56.0	49.0	42.0	35.0	29.0	26.0	1.4	-8.0	-12.7	-16.7	-21.8	-31.7
50	67854	-34.5	-29.9	-26.9	-19.9	-16.0	-11.4	21.4	27.2	32.1	38.1	44.1	50.7	57.7	57.7	50.7	44.1	38.1	32.1	27.2	21.4	1.4	-11.4	-16.0	-19.9	-26.9	-34.5
40	72470	-38.9	-34.1	-28.7	-23.7	-19.0	-14.8	24.6	29.1	34.6	40.6	46.7	52.7	59.7	59.7	52.7	46.7	40.6	34.6	29.1	24.6	1.4	-14.8	-19.0	-23.7	-28.7	-38.9
30	29669	-44.7	-39.2	-32.7	-27.2	-22.6	-17.1	26.6	31.4	36.6	42.6	48.6	54.6	60.6	60.6	54.6	48.6	42.6	36.6	31.4	26.6	1.4	-17.1	-22.6	-27.2	-32.7	-44.7
25	82362	-49.0	-42.9	-36.2	-30.7	-24.4	-18.3	29.6	34.2	39.6	45.6	51.6	57.6	63.6	63.6	57.6	51.6	45.6	39.6	34.2	29.6	1.4	-18.3	-24.4	-30.7	-36.2	-49.0
20	87133	-54.3	-47.3	-39.7	-32.0	-26.0	-19.1	32.0	36.7	41.7	47.7	53.7	59.7	65.7	65.7	59.7	53.7	47.7	41.7	36.7	32.0	1.4	-19.1	-26.0	-32.0	-39.7	-54.3
15	93349	-61.2	-53.3	-44.0	-34.8	-27.6	-19.1	34.8	39.6	44.6	50.6	56.6	62.6	68.6	68.6	62.6	56.6	50.6	44.6	39.6	34.8	1.4	-19.1	-27.6	-34.8	-44.0	-61.2
10	102293	-73.3	-62.6	-51.0	-39.3	-30.3	-19.4	23.6	28.6	33.6	39.6	45.6	51.6	57.6	57.6	51.6	45.6	39.6	33.6	28.6	23.6	1.4	-19.4	-30.3	-39.3	-51.0	-73.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 4. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island - Annual
 NO. OBSERVATIONS == SURFACE = 6840. TOP = 4870

PRESSURE LEVEL (INCH)	MEAN HEIGHT (ft.)	MERIDIONAL WIND SPEED (KNOTS)						MEAN	+150	-150
		10.0	20.0	50.0	10.0	25.0	50.0			
SFC	571	-19.6	-17.5	-15.2	-12.9	-11.1	-9.0	-4.7	-8.4	-1.7
950	1840	-24.9	-22.1	-19.0	-15.9	-13.5	-10.7	-4.9	-7.9	-0.1
900	3360	-21.9	-19.3	-16.4	-13.5	-11.3	-8.7	-3.1	-6.1	9.2
850	4941	-24.1	-21.1	-17.9	-14.6	-12.3	-9.1	-3.1	-5.9	4.7
800	6617	-26.6	-22.2	-19.5	-15.8	-12.9	-9.5	-2.6	-4.3	8.4
750	8370	-29.9	-26.0	-21.7	-17.1	-14.1	-10.2	-2.2	-3.7	11.7
700	10236	-32.3	-28.0	-23.4	-18.6	-14.9	-10.6	-1.6	-2.6	15.0
650	12201	-35.3	-30.5	-25.3	-20.1	-16.1	-11.3	-1.1	-1.5	12.7
600	14304	-33.2	-33.2	-27.5	-21.8	-17.7	-12.2	-1.2	-1.4	16.7
550	16535	-41.4	-35.8	-29.8	-23.5	-18.7	-13.7	-1.1	-1.4	14.2
500	18957	-44.6	-38.7	-32.0	-25.3	-20.1	-14.0	-1.1	-1.4	9.0
450	21548	-48.9	-42.2	-36.9	-27.5	-21.9	-15.1	-1.1	-1.4	11.0
400	24416	-53.3	-45.9	-37.9	-29.8	-23.6	-16.2	-1.1	-1.4	12.3
350	27558	-59.2	-50.9	-41.9	-32.9	-26.9	-17.6	-0.9	-1.5	10.6
300	31666	-64.2	-55.1	-45.2	-35.3	-27.5	-18.7	-0.7	-1.5	12.4
250	35069	-67.9	-58.1	-47.4	-36.4	-28.5	-18.5	-0.5	-1.5	10.5
200	39700	-64.1	-54.6	-44.3	-33.9	-25.9	-16.4	-0.3	-1.3	10.7
175	42532	-57.3	-48.7	-39.3	-29.8	-22.5	-15.1	-0.1	-1.1	10.9
150	45749	-68.6	-42.2	-33.1	-25.1	-18.6	-11.6	-0.4	-1.4	11.3
125	49393	-40.3	-34.2	-27.6	-21.0	-15.8	-9.7	-0.6	-1.6	10.6
100	53855	-31.2	-26.6	-21.6	-16.6	-11.7	-8.1	-0.7	-1.7	10.5
80	58314	-24.0	-20.4	-16.9	-13.1	-10.2	-6.8	-0.8	-1.8	10.5
70	61031	-26.7	-17.5	-14.6	-11.5	-9.0	-6.1	-0.2	-0.2	10.6
60	64124	-16.3	-15.6	-13.1	-10.4	-8.3	-5.8	-0.3	-0.3	10.6
50	67854	-16.8	-14.6	-12.2	-9.8	-7.9	-5.7	-0.3	-0.3	11.5
40	72410	-15.5	-13.5	-11.3	-9.1	-7.4	-5.4	-0.1	-0.1	10.8
30	2949	-15.5	-13.5	-11.3	-9.1	-7.4	-5.4	-0.1	-0.1	10.9
25	92312	-16.0	-13.9	-11.6	-9.2	-7.4	-5.3	-0.1	-0.1	10.5
20	87113	-17.1	-14.8	-12.3	-9.8	-7.8	-5.5	-0.5	-0.5	10.7
15	93319	-19.4	-16.7	-13.8	-10.9	-8.6	-6.9	-0.5	-0.5	12.6
10	1022213	-23.4	-20.1	-16.5	-12.9	-10.1	-8.8	-0.8	-0.8	16.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 5. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: Winter
NO. OBSERVATIONS -- SURFACE = 1961, TOP = 1031

PRESSURE LEVEL (mb)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)										
		1.0 -2SD	2.28 -SD	5.0 0	10.0 +SD	15.87 +1SD	25.0 +1.5SD	50.0 MEAN	75.0 +1SD	84.13 +1.5SD	90.0 +2SD	95.0 +2.5SD
SFC	571	0	0	0	1.4	2.2	4.3	8.5	12.7	14.0	16.6	18.8
950	1916	0	0	0	1.2	3.8	6.8	13.0	19.2	22.2	24.8	21.1
900	3402	0	0	0	1.0	4.0	6.7	12.0	17.5	20.2	22.5	23.2
850	4961	0	0	0	0.4	3.3	5.5	8.1	13.5	18.9	21.5	34.4
800	6598	0	0	0	0.9	4.2	6.7	9.7	15.7	21.7	24.7	31.0
750	8323	0	0	0	1.2	4.9	7.8	11.2	18.1	25.0	27.2	32.1
700	10154	0	0	0	1.7	5.7	8.9	12.6	20.2	27.8	31.3	36.7
650	12083	0	0	0	2.0	6.6	10.1	14.3	22.7	31.1	34.7	42.1
600	14154	0	0	0	2.8	7.7	11.6	16.2	25.4	36.3	38.8	46.1
550	16348	0	0	0	3.1	8.7	13.0	18.1	28.4	38.7	43.1	48.0
500	18734	0	0	0	3.7	9.7	14.4	19.9	31.1	42.3	47.8	53.7
450	21289	0	0	0	4.5	11.1	16.2	22.2	34.5	46.8	52.8	58.5
400	24104	0	0	0	5.0	12.3	18.0	24.7	38.3	51.9	58.6	64.5
350	27192	0	0	0	5.8	14.0	20.4	27.9	43.2	58.5	66.0	71.1
300	30640	0	0	0	6.8	16.8	23.1	31.9	48.5	65.1	73.3	79.2
250	34577	0	0	0	9.2	19.1	26.7	35.7	54.0	72.3	81.3	84.3
200	39239	0	0	0	11.3	21.1	28.8	37.8	56.2	74.6	83.6	87.0
175	41995	0	0	0	12.4	21.4	28.6	34.2	54.2	71.4	79.1	85.6
150	45164	0	0	0	13.4	21.3	27.5	34.8	49.6	64.6	71.7	77.1
125	48875	0	0	0	12.3	19.3	24.7	31.1	44.0	56.9	66.0	71.6
100	53360	0	0	0	9.9	15.5	19.8	24.9	35.3	45.7	50.8	55.1
80	57808	0	0	0	4.7	9.4	13.1	17.5	26.3	35.1	39.5	43.2
70	60476	0	0	0	2.7	6.6	9.7	13.3	20.6	27.9	31.5	34.6
60	63642	0	0	0	0.0	0.0	6.0	9.5	16.6	23.7	27.2	30.2
50	67261	0	0	0	2.0	4.6	7.7	14.0	20.3	23.4	26.0	34.0
40	71814	0	0	0	1.6	4.1	7.1	13.2	19.3	22.4	24.8	35.9
30	77753	0	0	0	1.3	4.4	8.0	12.3	22.4	26.2	29.3	31.4
25	81558	0	0	0	1.5	4.5	8.7	16.7	24.7	28.6	31.9	36.2
20	86247	0	0	0	1.4	5.4	10.2	19.4	29.4	34.2	38.2	40.5
15	94372	0	0	0	1.9	7.6	13.0	25.2	37.4	43.4	48.5	53.4
10	101166	0	0	0	3.5	10.3	18.3	24.5	50.7	58.7	65.5	67.6

Table 6. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels, for San Nicolas Island: Winter
NO. OBSERVATIONS -- SURFACE = 1961. TOP = 1031

PRESSURE LEVEL (MBAR)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)						MEAN	.15D	.13D	.10D	.05D	.02D	
		1.0	2.2D	5.0	10.0	15.87	25.0							
SFC	571	-10.3	-8.3	-6.1	-4.0	-2.3	-0.3	3.7	7.7	9.7	11.4	13.5	15.7	17.7
950	1916	-21.9	-18.3	-14.4	-10.5	-7.5	-3.9	3.3	10.5	14.1	17.1	21.0	24.9	26.5
900	3402	-21.6	-18.2	-14.5	-10.8	-7.9	-4.5	2.4	9.3	12.7	15.6	19.3	23.0	26.4
850	4961	-21.3	-17.9	-13.9	-10.1	-7.1	-3.6	3.6	10.8	14.3	17.3	21.1	25.0	25.0
800	6598	-22.3	-19.4	-14.2	-10.0	-6.7	-2.8	5.0	12.8	16.7	20.0	24.2	28.4	32.2
750	8323	-23.7	-19.0	-14.3	-9.6	-6.0	-1.7	7.0	15.7	20.0	23.6	26.3	33.0	37.3
700	10156	-23.3	-18.7	-13.7	-8.7	-4.8	-0.2	9.1	16.4	23.0	26.9	31.9	36.9	41.5
650	12043	-24.3	-19.3	-13.8	-8.3	-4.0	1.0	11.3	21.6	26.6	30.9	36.4	41.9	46.9
600	14144	-25.3	-19.8	-13.8	-7.8	-3.1	2.4	13.6	24.8	30.3	35.0	41.0	47.0	52.5
550	16345	-27.0	-20.9	-14.2	-7.0	-2.4	3.7	16.1	26.5	34.6	39.8	46.4	53.1	59.2
500	18735	-28.2	-21.6	-14.4	-7.2	-1.6	5.0	18.4	31.8	38.4	44.0	51.2	58.4	65.0
450	21249	-30.4	-23.1	-15.2	-7.3	-1.1	6.2	20.9	35.6	42.9	49.1	57.0	64.9	72.2
400	24104	-33.2	-25.1	-16.3	-7.5	-0.7	7.4	23.7	40.0	48.1	56.9	63.7	72.5	80.6
350	27192	-36.5	-27.5	-17.6	-7.8	-0.1	8.9	27.3	45.7	54.7	62.4	72.2	82.1	91.1
300	30660	-38.5	-28.5	-17.6	-6.9	-1.5	11.4	31.6	51.8	61.7	70.1	81.0	91.8	101.7
250	34577	-37.7	-27.0	-15.4	-3.7	5.3	16.0	37.6	59.2	69.9	78.9	90.6	102.2	112.9
200	39219	-29.6	-19.5	-8.2	-3.0	11.8	22.1	43.1	64.1	74.1	83.2	94.4	105.7	116.0
175	41995	-22.7	-13.3	-3.0	7.2	15.2	24.6	43.7	62.6	72.2	80.2	90.4	100.7	110.1
150	45164	-16.2	-6.1	-0.8	9.6	16.5	24.6	41.1	57.6	65.1	72.6	81.4	90.3	98.4
125	48875	-12.8	-5.7	2.0	9.7	15.7	22.8	37.1	51.4	58.5	64.5	72.2	79.9	87.0
100	53360	-11.6	-5.6	-6.9	11.9	17.7	29.4	41.5	47.3	52.3	58.6	65.0	70.8	70.8
80	57698	-13.4	-6.5	-3.1	2.2	6.4	11.3	21.3	31.3	36.2	40.4	45.7	51.1	56.9
70	60616	-15.5	-11.1	-6.3	-1.5	2.2	6.6	15.5	24.4	28.8	32.5	37.3	42.1	46.9
60	63642	-19.4	-10.5	-10.1	-5.8	-2.2	2.1	10.7	19.3	23.4	27.2	31.9	36.5	40.8
50	67241	-23.5	-10.3	-4.7	-10.2	-6.6	-2.4	6.1	14.6	18.4	22.4	26.9	31.5	35.7
40	71814	-24.4	-10.5	-14.6	-10.8	-6.3	-10.8	2.4	11.9	16.4	20.2	25.1	30.0	34.5
30	77733	-35.9	-30.5	-12.6	-18.6	-14.0	-8.6	2.5	13.6	19.0	23.3	29.6	35.5	40.9
25	81558	-39.2	-33.2	-26.7	-20.2	-15.1	-9.1	3.0	15.1	21.1	26.2	32.7	39.2	45.2
20	86267	-45.6	-38.6	-30.6	-22.7	-16.6	-9.4	5.2	19.8	27.0	33.1	41.0	46.8	56.0
15	92312	-51.7	-42.7	-32.6	-23.0	-15.5	-6.7	11.2	29.1	37.9	45.4	51.0	67.6	73.4
10	10116	-51.2	-46.1	-34.0	-21.9	-12.5	-1.4	4.6	43.6	54.7	64.1	76.2	88.3	99.4

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 7. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Winter
NO. OBSERVATIONS -- SURFACE = 1961, TOP = 1031

PRESSURE LEVEL (MBSI)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)					MEAN	.150	.130	.110	.090	.070	.050	.030	.010	
		1.0	2.0	5.0	10.0	15.0										
SFC	571	-19.7	-17.5	-15.1	-12.7	-10.9	-8.7	-4.3	.1	2.3	4.1	6.5	8.9	11.1		
950	1916	-28.4	-25.1	-21.5	-18.0	-15.2	-11.9	-5.3	1.3	4.6	7.4	10.9	14.5	17.8		
900	3402	-25.1	-15.5	-12.0	-10.0	-13.0	-10.0	-3.9	2.2	5.2	7.7	11.0	14.3	17.3		
850	4961	-28.0	-24.7	-21.1	-17.4	-14.6	-11.3	-4.5	2.3	5.6	8.4	12.1	15.7	19.6		
800	6598	-32.4	-28.6	-24.5	-20.3	-17.1	-13.3	-5.6	2.1	5.9	9.1	13.3	17.4	21.2		
750	8323	-37.4	-33.0	-28.2	-23.4	-19.7	-15.3	-6.4	2.5	6.9	10.6	15.4	20.2	24.6		
700	10156	-40.7	-35.9	-30.6	-25.4	-21.3	-16.5	-6.7	3.1	7.9	12.0	17.2	22.5	27.3		
650	12083	-44.2	-39.0	-33.3	-27.6	-23.1	-17.9	-7.2	3.5	8.7	13.2	16.9	24.6	29.8		
600	14154	-49.1	-43.2	-36.8	-30.4	-25.4	-19.5	-7.6	4.3	10.2	15.2	21.6	28.0	33.9		
550	16318	-53.3	-46.9	-39.9	-32.9	-27.5	-21.1	-8.1	4.9	11.3	16.7	22.7	30.7	37.1		
500	18734	-57.1	-50.2	-42.7	-35.2	-29.3	-22.4	-8.4	5.6	12.5	18.4	25.9	33.4	40.3		
450	21289	-62.1	-54.6	-46.4	-38.2	-31.8	-24.3	-9.0	6.3	13.8	20.2	28.4	36.6	44.1		
400	24104	-68.1	-59.6	-50.8	-41.7	-34.7	-26.4	-9.6	7.2	15.5	22.5	31.6	40.6	48.9		
350	27192	-75.9	-66.6	-56.5	-46.4	-38.5	-29.2	-10.4	8.4	17.7	25.6	35.7	45.8	55.1		
300	30640	-82.7	-72.6	-61.5	-50.5	-41.9	-31.8	-11.2	9.4	19.5	28.1	39.1	50.2	60.3		
250	34577	-87.7	-76.9	-65.1	-53.3	-44.1	-33.3	-11.3	10.7	21.5	30.7	42.5	54.3	65.1		
200	39239	-82.6	-72.4	-61.3	-50.2	-41.6	-31.4	-10.8	9.8	20.5	28.6	39.7	50.8	61.0		
175	41995	-74.6	-65.4	-55.4	-45.3	-37.5	-26.3	-9.6	9.1	18.3	26.1	36.2	46.2	55.4		
150	45144	-64.4	-56.4	-47.7	-39.0	-32.3	-24.3	-8.2	7.9	15.9	22.6	31.3	40.0	48.0		
125	48875	-54.8	-48.1	-40.8	-33.5	-27.8	-21.1	-7.5	6.1	12.8	20.5	33.1	39.8	46.0		
100	53360	-43.4	-38.1	-32.3	-26.5	-22.0	-16.7	-5.9	4.9	10.2	14.7	20.5	26.3	31.6		
80	57808	-34.7	-30.5	-25.0	-21.4	-17.9	-13.7	-5.3	3.1	7.3	10.8	15.4	21.1	24.1		
70	60416	-28.7	-21.5	-17.9	-15.2	-12.0	-9.2	-4.2	4.2	4.7	7.1	10.7	14.2	17.4		
60	63442	-26.1	-23.1	-19.8	-16.5	-13.9	-10.9	-4.7	4.5	4.7	7.1	10.4	13.7	16.7		
50	67261	-23.4	-20.7	-17.8	-14.9	-12.6	-9.9	-4.5	3.6	5.9	8.8	11.7	14.4	17.1		
40	71814	-20.7	-18.3	-15.7	-13.0	-11.0	-8.6	-3.7	1.2	3.6	5.6	8.3	10.9	13.3		
30	77753	-21.8	-19.3	-16.5	-13.8	-11.6	-9.1	-3.9	1.3	3.8	6.0	8.7	11.5	14.0		
25	81558	-23.2	-20.4	-17.4	-14.4	-12.0	-9.2	-3.6	2.0	4.8	7.2	10.2	13.2	16.0		
20	86247	-25.0	-21.9	-18.5	-15.1	-12.5	-9.4	-3.1	2.2	4.8	7.2	10.2	13.2	16.0		
15	92372	-28.2	-24.6	-20.7	-16.8	-13.7	-10.1	-2.8	1.5	6.1	8.9	12.3	15.7	18.8		
10	1011n6	-35.2	-30.5	-25.4	-20.3	-16.3	-11.6	-2.1	7.4	12.1	16.1	21.2	26.3	31.0		

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 8. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: Spring
 NO. OBSERVATIONS = SURFACE = 2162. TOP = 1163

PRESSURE LEVEL (INRS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)											
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	40.0 MEAN	75.0 +150	85.0 +150	90.0 +150	95.0 +150	97.3 +2SD
SFC	571	0	0	1.1	3.2	5.6	10.6	15.6	18.0	20.1	22.7	25.4	27.6
950	1857	0	0	1.2	3.3	7.1	13.7	20.3	23.5	26.2	29.8	33.3	36.5
900	3343	0	0	1.8	4.0	6.5	11.7	16.9	19.4	21.6	24.3	27.1	29.6
850	4906	0	0	3.5	5.6	8.1	13.1	16.1	20.6	22.7	25.4	28.1	30.6
800	6552	0	0	6.4	6.7	9.4	15.0	20.6	23.3	26.6	28.6	31.6	34.3
750	8244	0	0	7.6	10.7	17.1	23.5	26.6	29.3	32.7	36.1	39.2	42.7
700	10125	0	0	5.4	8.5	12.1	19.5	26.9	30.5	33.6	37.5	41.5	45.1
650	12064	0	0	5.7	9.3	13.6	22.2	30.8	35.1	38.7	43.4	46.0	52.3
600	14144	0	0	6.3	10.4	15.3	25.1	36.9	39.8	43.9	49.2	54.5	59.4
550	16248	0	0	7.1	11.7	17.1	26.2	39.3	44.7	49.3	55.3	61.2	66.6
500	18740	0	0	12.0	19.1	11.5	43.4	50.0	55.2	61.8	68.5	74.6	80.1
450	21309	0	0	1.3	8.7	21.3	45.1	55.7	61.7	68.9	76.3	83.1	90.9
400	24134	0	0	2.3	10.4	16.5	24.0	38.9	53.8	61.2	67.4	75.5	83.5
350	27231	0	0	3.6	12.4	19.7	27.3	43.6	59.9	68.0	74.0	81.6	92.4
300	30692	0	0	6.9	16.9	23.3	31.1	44.0	66.1	74.5	81.0	90.9	100.5
250	34639	0	0	7.4	17.5	25.4	34.7	53.6	72.5	81.6	89.7	99.8	110.0
200	39304	0	0	11.1	21.0	28.7	37.8	56.2	74.6	83.7	91.6	101.3	111.2
175	42054	0	0	4.6	13.5	22.4	29.3	37.5	50.0	70.5	78.7	85.6	94.5
150	52226	0	0	6.9	14.6	22.4	28.4	35.5	49.9	66.3	71.4	85.2	92.9
125	48963	1.9	7.8	14.2	20.7	35.7	31.6	43.6	55.6	61.5	66.5	73.0	85.3
100	53497	3.1	18.7	14.3	16.6	23.7	30.1	44.5	49.6	53.9	59.5	65.1	70.2
80	58019	0	0	1.2	6.1	9.9	14.4	23.5	32.6	37.1	40.9	45.9	50.7
70	60712	0	0	0.0	2.8	6.0	9.8	17.5	25.2	29.0	32.2	36.4	40.5
60	63852	0	0	0.0	0.0	0.0	1.0	3.6	6.7	10.3	22.4	25.8	34.9
50	67589	0	0	0.0	0.0	0.0	2.6	5.2	10.6	18.0	20.6	23.7	29.2
40	72211	0	0	0.0	0.0	0.0	2.4	4.9	10.1	15.3	20.0	22.7	25.5
30	78255	0	0	0.0	0.0	0.0	2.0	5.2	10.8	19.1	21.4	24.4	30.0
25	82133	0	0	0.0	0.0	0.0	3.0	6.0	12.2	18.4	21.4	27.3	33.6
20	86909	0	0	0.0	0.0	0.0	3.7	7.1	14.0	20.9	24.3	27.2	36.6
15	93159	0	0	0.0	0.0	0.0	4.5	8.7	11.2	25.7	31.5	38.0	42.6
10	102142	0	0	0.0	0.0	0.0	6.3	11.0	23.1	36.4	44.6	50.7	56.7

Table 9. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Spring
NO. OBSERVATIONS -- SURFACE = 2142, TOP = 1163

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)												
		1.0 -250	2.0 -250	5.0 -250	10.0 -150	15.0 -150	25.0 -50.0	50.0 MEAN	75.0 +1SD	84.13 +1SD	90.0 +1SD	95.0 +2SD	97.73 +2SD	99.0 +2SD
SFC	571	-8.3	-6.2	-3.9	-1.7	.1	2.2	6.4	10.6	12.7	14.5	16.7	19.0	21.1
950	1857	-14.4	-11.3	-7.9	-4.5	-1.9	1.2	7.5	13.8	16.9	19.5	22.9	26.3	29.4
900	3343	-14.8	-11.9	-8.8	-5.6	-3.2	-0.3	5.5	11.3	14.2	16.6	19.8	22.9	25.8
850	4908	-15.8	-12.7	-9.4	-6.9	-3.4	-0.3	5.9	12.1	15.2	17.8	21.2	24.5	27.6
800	6552	-17.6	-14.1	-10.3	-6.5	-3.5	-0.5	7.1	14.2	17.7	20.7	24.5	28.3	31.0
750	8284	-18.4	-14.5	-10.3	-6.0	-2.7	1.2	9.1	17.0	20.9	24.2	28.5	32.7	36.6
700	10125	-20.0	-15.6	-10.8	-6.0	-2.2	1.2	11.2	20.2	24.6	28.4	33.2	38.0	42.4
650	12064	-21.3	-16.3	-10.9	-5.4	-1.2	3.8	13.9	24.0	29.0	33.2	38.7	44.1	49.1
600	14144	-22.8	-17.2	-11.1	-5.9	-0.3	5.3	16.6	27.9	33.5	38.2	44.3	50.4	56.0
550	16348	-23.7	-17.6	-10.9	-4.2	1.0	7.1	19.6	32.1	38.2	43.4	50.1	56.8	62.9
500	18740	-25.3	-18.5	-11.1	-3.7	2.0	8.8	22.5	36.2	43.0	48.7	56.1	63.3	70.3
450	21369	-27.0	-19.5	-11.4	-3.2	3.1	10.6	25.7	40.8	48.3	54.6	62.8	70.9	78.4
400	24134	-28.1	-20.0	-11.2	-2.4	4.5	12.6	29.0	45.4	53.5	60.4	69.2	78.0	86.1
350	30231	-30.3	-21.4	-11.7	-2.0	5.6	14.5	32.6	50.7	59.6	67.2	76.0	86.6	95.5
300	30692	-30.6	-20.9	-10.4	-2.2	6.4	18.1	37.7	57.3	67.0	75.2	85.8	96.3	106.0
250	34639	-27.7	-17.7	-6.8	-0.9	12.5	22.5	42.7	52.9	72.9	81.4	92.2	103.1	113.1
200	39304	-18.5	-9.1	-1.1	1.3	19.3	28.7	47.7	66.7	84.1	94.3	104.5	113.9	124.0
175	42054	-12.4	-4.0	5.2	14.4	21.1	29.9	47.0	64.1	72.5	79.6	86.8	98.0	106.4
150	45226	-7.1	-2.2	6.2	16.1	22.3	29.6	44.4	59.2	66.5	72.7	80.6	88.6	95.9
125	48963	-3.9	2.2	6.8	15.4	20.6	26.7	39.0	51.3	57.4	62.6	69.2	75.8	81.9
100	53497	-6.5	-1.3	4.4	16.1	14.6	19.8	30.5	41.2	46.4	50.9	56.6	62.3	67.5
80	58009	-12.8	-6.1	-3.0	2.1	6.1	10.8	20.3	29.8	34.5	38.5	43.6	48.7	53.4
70	60712	-15.2	-11.1	-6.4	-2.1	1.4	5.5	13.9	22.3	26.4	34.4	38.9	43.0	48.0
60	63852	-18.3	-14.5	-10.4	-6.2	-3.0	6.5	16.2	20.0	23.2	27.4	31.5	35.3	39.3
50	67589	-22.2	-18.5	-14.5	-10.5	-7.4	-3.7	11.1	14.8	17.9	21.9	25.9	29.6	33.3
40	72211	-25.9	-22.2	-18.1	-11.1	-10.9	-7.2	4.0	8.0	11.7	14.9	18.9	23.0	26.7
30	78255	-28.9	-24.8	-20.3	-15.9	-12.4	-8.3	6.3	12.4	15.9	20.3	24.8	28.9	32.9
25	82133	-32.0	-27.4	-22.4	-17.3	-13.4	-8.8	6.6	10.0	14.6	18.5	23.6	28.6	33.2
20	86919	-35.1	-29.8	-24.0	-16.2	-13.7	-8.4	2.4	13.2	18.5	23.0	28.8	34.6	39.9
15	93159	-36.9	-30.7	-23.9	-17.1	-11.8	-5.6	7.1	19.8	26.0	31.3	38.1	44.9	51.1
10	102142	-41.1	-33.3	-24.8	-16.4	-9.8	-2.0	13.7	29.4	37.2	43.8	52.2	60.7	68.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 10. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Spring

NO. OBSERVATIONS -- SURFACE = 2142. TOP = 1163

PRESSURE LEVEL (mbS)	MEAN HEIGHT (ft)	MERIDIONAL WIND SPEED (KNOTS)						MEAN	.150	.300	.450	.600	.750	.900	.950	.975	.990
		1.0	2.25	5.0	10.0	15.0	25.0										
SFC	571	-22.6	-20.2	-17.6	-15.0	-13.0	-10.6	-5.4	-1.0	1.4	3.4	6.0	8.6	11.0			
950	1857	-29.5	-26.2	-22.6	-19.1	-16.3	-13.0	-6.4	1.2	3.5	6.3	9.8	13.4	16.7			
900	3343	-24.1	-21.3	-18.3	-15.3	-12.9	-10.1	-4.5	1.1	3.9	6.3	9.3	12.3	15.1			
850	4998	-26.2	-23.1	-19.8	-16.4	-13.8	-10.7	-4.7	1.7	4.8	7.4	10.6	14.1	17.2			
800	6552	-29.1	-25.6	-22.4	-19.4	-16.9	-15.0	-11.5	-4.4	2.7	6.2	9.2	13.0	16.8	20.3		
750	8284	-32.1	-28.1	-23.8	-19.5	-16.1	-12.1	-4.1	3.9	7.9	11.4	15.4	19.9	23.9			
700	10125	-35.3	-30.6	-25.9	-21.1	-17.3	-12.6	-3.8	5.2	9.7	13.5	18.3	23.2	27.7			
650	12064	-38.8	-33.8	-28.4	-23.9	-18.8	-13.9	-3.6	6.3	11.2	15.4	20.8	26.2	31.2			
600	14144	-41.9	-36.5	-30.6	-24.6	-20.0	-16.6	-3.5	7.6	13.0	17.6	23.6	29.5	34.9			
550	16348	-45.4	-39.4	-32.9	-26.4	-21.4	-15.3	-3.2	8.9	16.9	20.9	26.5	33.9	39.0			
500	18740	-49.6	-43.6	-35.8	-28.5	-22.9	-16.3	-2.8	1.7	7.3	22.9	30.2	37.4	44.0			
450	21309	-54.0	-46.7	-38.8	-30.9	-24.7	-17.4	-2.7	12.9	19.3	25.5	33.4	41.3	48.6			
400	24134	-57.8	-50.0	-41.5	-32.9	-26.3	-18.5	-2.6	13.3	21.1	27.7	36.3	44.8	52.6			
350	27231	-62.9	-54.3	-44.9	-35.5	-28.2	-19.6	-2.1	15.4	20.9	31.3	40.7	50.1	58.7			
300	30692	-68.1	-58.7	-46.4	-36.1	-30.1	-20.7	-1.5	17.7	27.1	35.1	45.4	55.7	65.1			
250	34639	-71.2	-61.2	-50.3	-39.3	-30.8	-20.8	-0.9	20.8	30.9	38.6	49.5	60.4	70.4			
200	39304	-65.3	-56.3	-45.9	-35.6	-27.5	-18.0	-0.3	20.6	30.1	38.2	48.5	58.9	68.4			
175	42054	-57.2	-48.7	-39.4	-30.2	-23.0	-14.5	-2.7	19.9	28.4	35.6	44.8	54.1	62.4			
150	45226	-67.4	-40.2	-32.4	-24.5	-16.4	-11.2	-3.4	18.0	25.2	31.3	39.2	47.0	54.7			
125	48963	-39.5	-33.4	-26.7	-20.1	-14.9	-8.6	-3.6	16.0	22.1	27.3	33.9	40.6	46.7			
100	53497	-20.7	-25.9	-20.6	-15.4	-11.3	-6.5	-3.3	13.1	17.9	22.0	32.5	37.3	42.5			
80	58009	-23.1	-19.5	-15.6	-11.7	-8.6	-5.0	-2.3	9.6	13.2	16.3	20.2	24.1	27.7			
70	60712	-19.1	-16.1	-12.8	-9.5	-6.9	-3.9	-2.3	8.5	11.5	14.1	17.4	20.7	23.7			
60	63852	-16.2	-13.6	-11.2	-8.5	-6.5	-4.1	-1.8	5.7	8.1	10.1	12.8	15.4	17.8			
50	67569	-14.6	-12.7	-10.4	-8.2	-6.4	-4.3	-0.1	4.1	6.2	8.0	10.2	12.5	14.6			
40	72211	-13.4	-11.6	-9.6	-7.6	-5.6	-3.6	-0.4	3.4	5.2	6.8	8.8	10.8	12.6			
30	78255	-13.2	-11.4	-9.4	-7.4	-5.4	-3.6	-0.2	3.6	5.4	7.0	9.0	11.0	12.8			
25	82133	-13.7	-11.6	-9.7	-7.6	-5.9	-3.9	-0.2	4.0	5.9	7.9	9.7	11.0	13.7			
20	86959	-14.4	-12.4	-10.2	-7.9	-6.2	-4.2	-0.2	4.2	6.2	7.9	10.2	12.4	14.4			
15	93159	-16.4	-14.0	-11.4	-8.6	-6.6	-4.4	-0.4	5.2	7.6	9.6	12.2	14.8	17.2			
10	102142	-19.5	-16.6	-13.4	-10.3	-7.6	-4.9	-1.0	6.9	9.8	12.3	15.4	18.6	21.5			

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 11. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: Summer

NO. OBSERVATIONS -- SURFACE = 2377. TOP = 1336

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT)	2.28					SCALAR WIND SPEED (KNOTS)					
		1.0	-250	5.0	10.0	15.0	20.0	50.0	75.0	90.0	95.0	+250
SFC	571	0	0	0	0	0	4.4	8.7	13.0	15.1	16.9	21.5
950	1627	0	0	0	0	0	4.6	9.1	13.6	15.8	17.7	22.5
900	3353	0	0	0	0	0	5.0	8.8	12.6	14.5	16.1	20.2
850	4970	0	0	0	0	0	5.5	9.4	13.3	15.2	16.8	21.0
800	6677	0	0	0	0	0	6.1	10.3	14.5	16.6	18.4	22.9
750	8468	0	0	0	0	0	6.6	11.4	16.0	18.3	20.2	25.0
700	10367	0	0	0	0	0	7.1	12.6	17.6	20.1	22.2	27.5
650	12369	0	0	0	0	0	7.6	13.7	19.2	21.9	24.2	27.6
600	14511	0	0	0	0	0	8.2	14.7	20.8	23.8	27.1	30.1
550	16881	0	0	0	0	0	8.6	14.7	20.8	23.8	27.1	32.8
500	19245	0	0	0	0	0	9.0	15.8	22.6	26.0	28.9	35.9
450	21900	0	0	0	0	0	9.6	17.2	24.8	28.5	31.7	39.6
400	24806	0	0	0	0	0	10.3	19.1	27.7	31.9	35.5	43.5
350	28009	0	0	0	0	0	11.0	21.4	31.0	35.8	39.8	48.9
300	31591	0	0	0	0	0	11.7	24.8	35.9	41.3	45.9	55.0
250	35673	0	0	0	0	0	12.4	28.9	40.6	46.7	51.7	63.7
200	40469	0	0	0	0	0	13.1	33.5	45.5	52.0	57.2	70.4
175	43248	0	0	0	0	0	13.8	36.7	49.8	56.3	61.8	75.9
150	46391	0	0	0	0	0	14.5	23.0	35.6	48.2	54.4	66.4
125	50039	0	0	0	0	0	15.0	20.3	31.0	41.7	47.0	57.2
100	54459	0	0	0	0	0	16.1	16.4	23.2	32.0	36.3	40.0
80	58911	0	0	0	0	0	16.6	16.3	20.3	23.3	25.8	29.1
70	61614	0	0	0	0	0	17.1	11.3	15.5	17.5	19.2	23.7
60	64764	0	0	0	0	0	17.6	7.9	12.0	16.1	19.8	22.0
50	68537	0	0	0	0	0	18.1	5.4	9.6	14.2	21.1	26.0
40	73215	0	0	0	0	0	18.6	10.0	12.3	17.1	21.9	26.2
30	79327	0	0	0	0	0	19.1	13.1	15.6	20.6	26.0	30.7
25	83245	0	0	0	0	0	19.6	15.9	17.4	20.2	24.2	34.6
20	88087	0	0	0	0	0	20.1	11.9	15.0	26.0	31.8	40.1
15	94499	0	0	0	0	0	20.6	16.0	18.5	21.5	33.5	42.3
10	103678	0	0	0	0	0	21.1	12.9	16.6	22.7	29.5	45.5
		6.7	10.0	14.1	18.2	21.4	25.2	32.8	40.4	44.2	47.4	55.6

Table 12. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Summer

NO. OBSERVATIONS -- SURFACE = 2377. TOP = 1336

PRESSURE LEVEL (MBSL)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)						95.0				99.0	
		1.0	2.5	5.0	10.0	15.0	25.0	50.0	75.0	85.0	90.0	95.0	99.0
SFC	571	-7.6	-5.4	-3.8	-1.8	-0.2	1.4	5.4	9.2	11.0	12.6	14.4	16.4
950	1827	-9.9	-7.4	-5.5	-3.1	-1.3	-0.6	5.2	9.6	11.7	13.5	16.2	20.7
900	3353	-10.6	-8.5	-6.2	-4.0	-2.2	-0.1	4.1	8.3	10.4	12.2	16.7	18.8
850	4970	-11.8	-9.5	-7.0	-4.5	-2.6	-0.3	4.3	8.9	11.2	13.1	15.6	20.4
800	6677	-14.7	-12.0	-9.1	-6.2	-3.9	-1.2	4.2	9.6	12.3	14.6	17.5	23.1
750	8468	-16.6	-13.8	-10.5	-7.2	-4.7	-1.7	4.4	10.5	13.5	16.8	19.3	25.6
700	10367	-19.0	-15.7	-12.1	-8.4	-5.6	-2.3	4.5	11.3	14.6	17.4	21.1	28.0
650	12369	-21.1	-17.4	-13.4	-9.4	-6.3	-2.6	4.8	12.2	15.9	19.8	23.9	30.7
600	14511	-23.1	-19.1	-14.7	-10.3	-6.9	-2.9	5.1	13.5	17.5	20.9	25.3	33.7
550	16761	-24.2	-19.9	-15.2	-10.5	-6.6	-2.5	6.1	15.1	19.4	23.1	27.8	36.8
500	19245	-25.8	-21.1	-16.0	-10.8	-6.8	-2.1	7.5	17.1	21.4	25.8	31.0	40.8
450	21900	-26.9	-21.6	-16.2	-10.6	-6.3	-1.2	9.2	19.6	24.7	29.0	36.8	45.3
400	24806	-27.6	-22.3	-16.3	-10.2	-5.5	-0.5	11.3	22.6	26.1	32.8	38.9	44.9
350	28009	-29.6	-23.4	-16.7	-10.9	-5.7	-1.5	14.0	26.5	32.7	37.9	44.7	51.4
300	31591	-30.1	-27.4	-16.1	-10.8	-5.1	-1.6	17.2	30.6	37.5	43.2	50.5	57.8
250	35673	-29.4	-22.4	-16.7	-10.7	-5.1	-1.9	19.9	34.5	41.5	47.5	55.1	64.5
200	40449	-28.8	-21.5	-13.5	-7.5	-3.7	-6.0	22.9	37.8	45.1	51.3	59.3	74.6
175	43268	-26.9	-19.9	-12.2	-4.6	-1.4	6.4	22.7	37.0	44.0	50.0	57.6	72.3
150	46391	-22.4	-16.4	-9.8	-3.2	-1.9	7.9	20.2	32.5	38.5	43.6	50.2	62.6
125	50039	-22.6	-17.4	-11.7	-6.1	-1.7	3.5	14.0	24.5	29.7	34.1	39.7	50.6
100	54459	-25.7	-21.5	-16.9	-12.4	-6.8	-1.6	14.6	30.9	42.4	46.6	52.2	63.5
80	58911	-27.0	-23.4	-16.9	-11.2	-6.2	-1.5	16.2	34.5	41.5	47.5	55.1	69.8
70	61614	-28.1	-25.4	-22.4	-19.5	-17.2	-14.5	-9.0	-3.5	-1.5	4.4	10.1	17.8
60	64714	-31.1	-28.5	-25.6	-22.7	-20.5	-17.9	-12.5	-7.1	-4.5	-2.3	3.5	6.1
50	68517	-34.6	-32.0	-29.1	-26.2	-24.3	-21.4	-16.0	-10.6	-6.0	-5.0	-2.9	2.6
40	73215	-39.5	-36.7	-33.7	-30.7	-28.3	-25.5	-19.9	-14.3	-11.5	-9.1	-3.1	-0.3
30	79327	-44.6	-41.6	-38.3	-35.0	-32.5	-29.5	-23.4	-17.3	-14.3	-11.8	-5.2	-2.2
25	83225	-47.1	-44.0	-40.6	-37.2	-34.6	-31.5	-25.2	-18.9	-15.8	-13.2	-6.4	-3.3
20	88047	-49.2	-46.0	-42.5	-39.0	-36.3	-33.1	-26.6	-20.1	-16.9	-14.2	-7.2	-4.3
15	94409	-54.4	-50.7	-46.7	-42.7	-39.6	-35.9	-28.5	-21.1	-17.4	-14.3	-6.3	-2.6
10	103418	-60.9	-56.7	-52.2	-47.6	-44.1	-39.9	-31.5	-23.1	-18.9	-15.4	-8.8	-4.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 13. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Summer

NO. OBSERVATIONS -- SURFACE = 2377, TOP = 1336

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)									
		1.0	2.25	5.0	10.0	15.0	20.0	25.0	30.0	40.0	97.73 +250
SFC	-18.4	-16.5	-14.4	-12.3	-10.6	-8.7	-6.7	-4.7	-2.7	1.2	2.9
950	1827	-19.3	-17.2	-14.9	-12.5	-10.7	-8.6	-6.2	-2.1	2.3	5.0
900	3353	-16.4	-16.2	-13.8	-11.4	-9.6	-7.4	-3.0	1.4	3.6	6.5
850	4910	-18.9	-16.5	-13.9	-11.3	-9.3	-6.9	-2.1	5.1	7.8	9.8
800	6617	-18.6	-16.0	-13.2	-10.3	-8.1	-5.5	-0.2	5.1	7.7	10.2
750	8468	-18.2	-15.4	-12.3	-9.2	-6.8	-4.0	1.8	7.6	10.4	12.4
700	10367	-18.1	-15.1	-11.8	-8.5	-6.0	-3.0	3.1	9.2	12.8	14.7
650	12269	-18.1	-15.0	-11.6	-8.2	-5.5	-2.4	4.3	10.4	12.2	15.6
600	14511	-19.3	-15.9	-12.2	-8.6	-5.7	-2.3	4.5	11.3	16.2	18.8
550	16781	-20.7	-17.1	-13.2	-9.3	-6.2	-2.6	4.7	12.0	15.6	18.7
500	19245	-22.5	-18.6	-14.4	-10.1	-6.5	-2.9	5.0	12.9	16.8	20.1
450	21900	-24.9	-20.6	-15.9	-11.2	-7.5	-3.2	5.6	14.4	18.7	22.4
400	24806	-27.7	-22.9	-17.6	-12.4	-8.3	-3.5	6.3	16.1	20.9	24.4
350	28009	-30.9	-25.4	-19.4	-13.4	-8.7	-3.7	8.0	19.2	25.0	28.6
300	31591	-32.9	-26.8	-20.1	-13.5	-8.3	-2.2	10.2	22.6	28.7	32.5
250	35673	-34.2	-27.5	-20.2	-12.8	-7.1	-0.4	13.3	27.0	33.7	36.1
200	40469	-34.4	-27.3	-19.6	-14.8	-5.8	1.3	15.7	30.1	37.2	43.2
175	43249	-30.4	-23.4	-16.6	-9.5	-5.9	2.7	16.0	29.3	35.9	41.5
150	46391	-24.6	-19.1	-13.1	-7.1	-2.5	3.0	14.1	25.2	30.7	35.3
125	50339	-19.0	-14.6	-10.3	-5.7	-2.2	2.0	10.4	16.8	23.0	31.1
100	54459	-14.8	-11.9	-8.7	-5.6	-3.1	-0.2	5.7	11.6	14.5	20.1
80	58911	-11.6	-9.5	-7.2	-4.9	-3.1	-1.0	3.3	7.6	9.7	11.5
70	61614	-9.9	-8.2	-6.3	-4.4	-2.9	-1.2	2.4	6.0	7.7	9.2
60	64764	-10.6	-8.9	-7.1	-5.2	-3.6	-2.1	1.3	4.7	6.4	7.8
50	68517	-10.4	-8.8	-7.1	-5.3	-4.0	-2.4	0.8	4.0	5.6	6.9
40	73215	-12.2	-10.5	-8.6	-6.8	-5.3	-3.6	-0.1	3.4	5.1	6.6
30	79327	-11.8	-10.1	-8.3	-6.5	-5.1	-3.4	-0.1	3.3	4.9	6.3
25	83245	-12.5	-10.7	-8.8	-6.8	-5.3	-3.5	-0.1	3.7	5.5	7.0
20	88047	-13.4	-11.5	-9.4	-7.4	-5.8	-3.9	-0.1	3.7	5.6	7.2
15	94479	-14.5	-12.4	-10.1	-7.9	-6.1	-4.0	-0.2	4.4	6.5	8.3
10	103478	-16.9	-14.5	-11.8	-9.2	-7.1	-4.7	-0.3	5.3	7.7	9.8

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 14. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: Autumn
 NO. OBSERVATIONS = SURFACE = 2360; TOP = 1340

PRESSURE LEVEL (INBSI)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (MPH)											
		1.0	2.2	5.0	10.0	15.0	25.0	50.0	75.0	90.0	95.0	97.73 +2SD	99.0
SFC	571	0	0	0	0	0	0	0	0	0	0	0	0
950	1854	0	0	0	0	0	0	0	0	0	0	0	0
920	3366	0	0	0	0	0	0	0	0	0	0	0	0
850	4961	0	0	0	0	0	0	0	0	0	0	0	0
800	6640	0	0	0	0	0	0	0	0	0	0	0	0
750	8406	0	0	0	0	0	0	0	0	0	0	0	0
700	16272	0	0	0	0	0	0	0	0	0	0	0	0
650	12251	0	0	0	0	0	0	0	0	0	0	0	0
600	14364	0	0	0	0	0	0	0	0	0	0	0	0
550	16611	0	0	0	0	0	0	0	0	0	0	0	0
500	19049	0	0	0	0	0	0	0	0	0	0	0	0
450	21667	0	0	0	0	0	0	0	0	0	0	0	0
400	24541	0	0	0	0	0	0	0	0	0	0	0	0
350	27700	0	0	0	0	0	0	0	0	0	0	0	0
300	31239	0	0	0	0	0	0	0	0	0	0	0	0
250	35259	0	0	0	0	0	0	0	0	0	0	0	0
200	40097	0	0	0	0	0	0	0	0	0	0	0	0
175	42772	0	0	0	0	0	0	0	0	0	0	0	0
150	45613	0	0	0	0	0	0	0	0	0	0	0	0
125	45573	0	0	0	0	0	0	0	0	0	0	0	0
100	33993	0	0	0	0	0	0	0	0	0	0	0	0
80	58415	0	0	0	0	0	0	0	0	0	0	0	0
70	61699	0	0	0	0	0	0	0	0	0	0	0	0
60	64203	0	0	0	0	0	0	0	0	0	0	0	0
50	67927	0	0	0	0	0	0	0	0	0	0	0	0
40	72519	0	0	0	0	0	0	0	0	0	0	0	0
30	78543	0	0	0	0	0	0	0	0	0	0	0	0
25	82398	0	0	0	0	0	0	0	0	0	0	0	0
20	87152	0	0	0	0	0	0	0	0	0	0	0	0
15	93353	0	0	0	0	0	0	0	0	0	0	0	0
10	1022n8	0	0	0	0	0	0	0	0	0	0	0	0

Table 15. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Autumn

NO. OBSERVATIONS -- SURFACE = 2366, TOP = 1340

PRESSURE LEVEL (INPS)	MEAN HEIGHT (FT)	2326			5.0			10.0			15.0			25.0			50.0			ZONAL WIND SPEED (KNOTS)			WIND SPEED (KNOTS)							
		1.0	-2.0	-6.0	-4.0	-7.0	-10.0	-13.0	-16.0	-19.0	-12.0	-15.0	-18.0	-21.0	-1.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0		
SFC	571	-8.6	-6.4	-13.4	-10.3	-7.3	-4.9	-2.8	-1.2	.6	-2.1	-4.0	-6.7	-9.7	-12.0	6.4	8.2	10.0	11.6	13.6	15.6	17.4	19.4	21.4	23.4	25.4	27.4	29.4	31.4	33.4
950	1854	-16.2	-12.0	-17.7	-15.2	-12.0	-9.0	-13.0	-10.5	-7.7	-7.2	-4.0	-6.7	-10.5	-11.1	3.6	9.3	12.1	14.5	17.5	20.6	23.4	26.4	29.4	32.4	35.4	38.4	41.4	44.4	47.4
900	3366	-19.2	-15.2	-20.9	-17.2	-14.0	-11.0	-14.0	-11.0	-8.7	-7.2	-4.4	-7.2	-10.5	-11.1	1.3	7.2	9.9	12.2	15.2	18.6	20.9	23.9	26.9	29.9	32.9	35.9	38.9	41.9	44.9
850	4961	-20.9	-17.6	-22.6	-19.0	-19.0	-15.0	-15.0	-11.1	-11.1	-6.0	-4.4	-6.0	-10.5	-11.1	4.4	2.2	6.8	10.4	14.9	18.4	22.0	25.0	28.0	31.0	34.0	37.0	40.0	43.0	46.0
800	6606	-10222	-123.9	-125.7	-127.1	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	-122.2	
750	10222	-19.9	-19.9	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2	-22.2
700	12221	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3	-16.3
650	14364	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1
600	16611	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7	-28.7
550	19619	-30.0	-30.0	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3	-31.3
500	21667	-31.3	-31.3	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4	-33.4
450	24551	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0
400	32700	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1
350	31200	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9
300	35259	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8
250	40067	-31.6	-31.6	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5	-32.5
200	42772	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
175	45915	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8	-21.8
150	49773	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
125	53993	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9
100	58415	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1
75	61699	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7	-23.7
60	64223	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8	-26.8
50	67227	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2	-27.2
40	72530	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7
30	78533	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1	-33.1
25	82298	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4	-36.4
20	87152	-40.7	-34.7	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3	-37.3
15	93353	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4	-44.4
10	102228	-50.6	-41.9	-50.6	-32.4	-41.9	-32.4	-28.7	-23.9	-23.9	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0	-19.0

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 16. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: Autumn
NO. OBSERVATIONS -- SURFACE = 2360. TOP = 1360

PRESSURE LEVEL (INRS)	MEAN HEIGHT (FT.)	MERIDIONAL WIND SPEED (KNOTS)												
		1.0	2.0 ^a	5.0	10.0	15.0 ^b	25.0	50.0	75.0	86.0 ^c	90.0	95.0	97.7 ^d	99.0 ^e
SFC	571	-17.5	-15.4	-13.5	-11.4	-9.8	-7.9	-6.0	-6.1	1.8	3.4	5.5	7.6	9.5
950	1054	-18.1	-16.3	-14.1	-11.8	-10.1	-8.1	-3.9	-3.3	2.3	4.9	6.3	8.5	10.5
900	3366	-20.1	-17.6	-14.8	-12.1	-9.9	-7.4	-2.2	-2.8	5.5	7.7	9.9	12.4	15.7
850	4961	-22.6	-19.6	-16.4	-13.1	-10.6	-7.6	-1.6	-4.4	7.4	9.4	12.2	16.4	19.4
800	6642	-25.0	-21.6	-17.9	-14.2	-11.3	-7.9	-1.0	-5.9	9.3	12.2	15.9	19.6	23.0
750	8466	-28.5	-24.4	-20.3	-16.9	-12.7	-8.8	-1.6	-1.6	7.2	11.1	14.4	18.7	23.0
700	10272	-31.1	-26.8	-22.1	-17.4	-13.8	-9.5	-0.8	-0.8	7.9	12.2	15.5	20.5	25.2
650	12251	-34.5	-29.7	-24.5	-19.3	-15.3	-10.5	-0.6	-0.6	8.7	13.5	17.3	22.7	27.9
600	14364	-37.7	-32.5	-26.8	-21.2	-16.8	-11.6	-1.1	-1.1	9.4	14.6	19.0	24.6	32.7
550	16611	-40.5	-34.9	-28.8	-22.7	-18.0	-12.4	-1.1	-1.1	10.2	15.8	20.5	26.0	38.3
500	19049	-44.0	-37.0	-31.3	-24.7	-19.5	-13.4	-1.1	-1.1	11.2	17.3	22.5	29.1	35.7
450	21667	-48.5	-41.4	-34.5	-27.1	-21.4	-14.7	-1.0	-1.0	12.7	19.4	25.1	32.5	39.8
400	24541	-52.8	-45.4	-37.4	-29.3	-23.1	-15.7	-0.8	-0.8	14.1	21.5	27.7	35.8	43.8
350	27760	-59.2	-50.9	-41.9	-32.8	-25.8	-17.5	-0.7	-0.7	16.1	24.4	31.4	40.5	49.5
300	31230	-64.0	-55.0	-45.1	-35.3	-27.6	-18.6	-0.2	-0.2	18.2	27.2	34.9	44.7	54.6
250	35259	-67.0	-57.4	-47.9	-36.5	-26.4	-18.8	-0.6	-0.6	20.0	29.6	37.7	46.2	58.4
200	40007	-61.5	-53.5	-42.6	-32.8	-25.1	-16.1	-0.1	-0.1	20.7	29.7	37.7	47.2	57.1
175	42772	-55.1	-46.9	-37.3	-29.0	-22.0	-13.8	-0.9	-0.9	20.9	27.8	34.8	43.7	52.7
150	45915	-47.2	-40.1	-32.4	-24.6	-18.6	-11.5	-0.5	-0.5	21.4	24.4	30.4	38.2	45.9
125	49573	-38.9	-31.1	-26.7	-19.4	-15.4	-9.6	-0.2	-0.2	20.2	25.0	31.3	37.7	43.5
100	53993	-29.7	-22.4	-19.7	-16.9	-12.4	-8.1	-0.1	-0.1	13.6	17.2	21.9	26.6	30.9
80	58615	-22.1	-19.0	-15.6	-12.2	-9.0	-6.5	-0.2	-0.2	6.1	9.2	11.8	15.2	21.7
75	61049	-19.3	-16.7	-13.8	-10.9	-8.7	-6.7	-0.1	-0.1	7.3	9.5	12.4	15.3	17.9
60	64203	-16.9	-14.7	-12.3	-9.8	-7.9	-5.7	-0.1	-0.1	3.5	5.7	7.6	10.1	12.5
50	67627	-16.1	-14.0	-11.7	-9.5	-7.7	-5.6	-0.1	-0.1	2.8	4.9	6.7	9.8	13.3
40	72530	-14.7	-12.6	-10.7	-8.6	-7.0	-5.1	-0.1	-0.1	2.7	4.6	6.2	8.3	10.4
30	79543	-13.9	-12.1	-10.1	-8.1	-6.6	-4.6	-0.1	-0.1	2.6	4.4	5.9	7.9	11.7
25	82398	-13.6	-11.8	-9.8	-7.8	-6.2	-4.2	-0.1	-0.1	3.2	5.0	6.6	8.6	12.4
20	87142	-14.5	-12.5	-10.3	-8.1	-6.1	-4.1	-0.1	-0.1	3.0	4.9	7.5	9.7	13.9
15	93353	-17.0	-14.6	-12.0	-9.3	-7.3	-5.3	-0.1	-0.1	2.9	4.9	6.3	12.0	17.6
10	10222n8	-26.9	-17.9	-14.7	-11.6	-9.7	-7.9	-0.1	-0.1	1.1	3.1	4.1	6.6	14.9

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 17. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: January

NO. OBSERVATIONS = 676, SURFACE = 326

PRESSURE LEVEL (INBS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)									
		1.0 -250	2.0 -50	5.0 10.0	10.0 -150	15.0 -40	25.0 -60	40.0 -100	50.0 -150	60.0 -200	75.0 -250
SFC	571	0	0	1.0	2.5	4.3	7.9	11.5	13.3	14.8	16.8
950	1929	0	0	1.0	3.5	6.4	12.3	18.2	21.1	23.6	26.7
900	3415	0	0	1.2	3.4	6.9	11.2	16.4	19.0	21.2	22.9
850	4970	0	0	2.8	4.9	7.4	12.5	17.6	20.1	22.2	25.0
800	6604	0	0	3.0	6.2	9.0	14.0	20.4	23.2	25.6	28.6
750	8123	0	0	1.9	5.3	7.9	11.0	17.2	23.4	26.5	31.7
700	10151	0	0	2.8	6.4	9.2	12.5	19.2	25.9	29.1	35.5
650	12077	0	0	3.5	7.4	10.5	14.1	21.4	28.7	32.0	38.9
600	14147	0	0	6.9	12.3	16.3	24.5	32.7	36.7	39.4	42.9
550	16335	0	0	4.5	6.9	9.8	13.7	18.3	27.5	32.7	44.5
500	18720	0	0	7	6.0	11.3	15.4	20.3	30.1	39.9	45.2
450	21270	0	0	1.7	7.4	13.1	17.6	22.8	33.5	44.2	48.6
400	24095	0	0	1.9	6.2	14.6	19.5	25.5	37.1	47.9	53.9
350	27165	0	0	6.5	16.0	21.8	28.7	42.8	56.7	59.6	65.3
300	30610	0	0	2.7	10.7	18.7	24.9	32.2	47.1	62.9	69.2
250	34541	0	0	2.3	11.3	20.4	27.4	35.7	52.5	69.3	77.6
200	39193	0	0	2.1	11.7	21.0	28.3	36.9	54.3	71.7	80.3
175	41949	0	0	5.7	14.0	22.3	28.8	36.4	51.9	67.4	81.5
150	45118	1.7	0.2	15.3	22.5	28.0	30.5	47.6	63.1	67.6	73.1
125	48815	1.2	0.2	7.0	13.4	19.7	24.7	30.5	42.4	54.3	60.1
100	53323	1.0	0.8	11.0	16.2	20.2	25.0	34.0	44.2	52.0	59.3
80	57776	0	0	6.1	10.4	13.6	17.8	25.8	33.8	37.8	45.2
70	60446	0	0	1.5	5.8	9.1	13.0	20.9	28.8	32.7	40.3
60	63550	0	0	3.2	6.2	9.7	16.9	26.1	27.6	30.6	38.4
50	67247	0	0	1.9	4.7	6.0	14.7	21.9	24.7	27.5	31.1
40	71914	0	0	1.9	4.7	8.0	14.6	21.2	26.5	27.3	30.8
30	77759	0	0	2.3	5.6	9.5	17.3	25.1	29.0	32.3	36.5
25	81565	0	0	2.2	5.9	10.3	19.2	28.1	32.5	36.2	41.0
20	86252	0	0	1.7	6.0	11.0	21.3	31.6	40.9	46.4	50.2
15	92375	0	0	2.0	6.8	12.5	24.1	35.7	41.4	52.5	56.9
10	101119	0	0	1.5	7.8	15.3	30.4	45.5	53.0	59.3	67.5

Table 18. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: January

NO. OBSERVATIONS == SURFACE == 676, TOP == 326

PRESSURE LEVEL (INCH)	MEAN HEIGHT (FT)	1.0			2.0			5.0			10.0			15.0			25.0			ZONAL WIND SPEED (KNOTS)				
		-250	-150	-100	-250	-150	-100	-250	-150	-100	-250	-150	-100	-250	-150	-100	-250	50.0	75.0	90.0	105.0	120.0	135.0	150.0
SFC	571	-9.1	-7.0	-5.9	-3.9	-2.4	-0.6	3.1	6.8	8.6	10.1	12.1	14.1	15.9	16.1	16.1	12.1	19.6	15.9	13.0	19.6	23.3	26.7	26.7
050	1929	-21.3	-17.9	-16.2	-10.5	-7.6	-4.2	2.7	9.6	12.0	15.9	19.6	23.3	26.7	26.7	26.7	14.7	18.3	16.9	14.7	18.3	21.9	25.2	25.2
000	3415	-21.4	-18.1	-16.5	-10.9	-6.1	-4.8	1.9	8.4	11.9	15.9	19.6	23.3	26.7	26.7	26.7	13.3	19.9	16.2	13.3	19.9	23.6	27.0	27.0
650	470	-21.0	-17.4	-13.9	-10.2	-7.3	-3.9	3.0	9.9	12.6	16.4	19.6	23.8	26.0	26.0	26.0	12.0	18.4	16.4	12.0	18.4	22.6	26.0	26.0
600	6694	-22.7	-18.4	-14.2	-10.0	-6.5	-3.0	4.5	12.0	15.4	19.6	23.3	26.9	26.9	26.9	26.9	11.0	17.7	15.4	11.0	17.7	22.6	26.9	26.9
750	8393	-23.3	-19.0	-16.4	-9.7	-6.1	-1.8	6.4	15.4	19.7	23.3	28.0	32.6	36.9	36.9	36.9	10.6	17.9	15.4	10.6	17.9	21.0	35.9	35.9
700	10151	-22.4	-18.1	-13.2	-8.4	-4.6	-0.1	6.9	17.9	22.4	26.2	31.0	35.9	40.4	40.4	40.4	10.6	20.6	25.5	29.6	34.9	40.4	45.1	45.1
650	12077	-23.5	-18.6	-13.3	-8.0	-4.9	-1.0	6.4	16.4	20.6	24.0	29.4	34.0	39.6	39.6	39.6	13.1	21.1	24.0	29.4	34.0	39.6	45.7	45.7
600	14147	-24.2	-19.5	-14.6	-10.6	-7.8	-3.2	2.2	13.1	17.4	21.7	27.5	33.6	38.4	45.4	45.4	13.7	21.7	24.0	29.4	34.0	39.6	58.1	58.1
550	16315	-27.7	-21.6	-15.0	-9.4	-5.4	-1.7	2.4	15.2	19.4	23.4	27.5	33.6	38.4	45.4	45.4	15.2	23.4	27.5	31.7	36.9	42.4	49.6	49.6
500	18720	-29.0	-22.5	-15.4	-10.2	-5.2	-1.7	2.4	17.1	20.4	23.4	27.5	33.6	38.4	45.4	45.4	16.1	24.4	28.6	32.8	37.0	43.2	50.0	50.0
450	21270	-30.7	-23.5	-15.7	-10.2	-5.4	-1.8	5.4	19.9	24.4	28.6	32.8	37.0	43.2	50.0	50.0	14.4	21.6	26.2	30.4	35.6	41.8	48.6	48.6
400	24045	-31.4	-24.1	-15.6	-10.2	-5.6	-1.8	7.2	22.9	27.4	31.6	36.8	42.0	48.2	55.0	55.0	16.4	24.4	28.6	32.8	37.0	43.2	50.0	50.0
350	27115	-32.4	-27.9	-16.0	-10.4	-6.2	-0.4	8.4	26.4	30.7	34.9	40.0	45.2	51.4	58.6	58.6	18.4	26.4	30.7	34.9	40.0	45.2	51.4	51.4
300	30610	-38.0	-30.3	-20.3	-11.8	-7.2	-1.0	10.7	20.7	24.9	29.1	34.3	40.5	46.7	52.9	52.9	21.4	29.6	33.8	38.0	43.2	49.4	56.6	56.6
250	34541	-35.5	-25.3	-14.1	-10.0	-5.7	-1.7	15.9	36.7	41.7	46.7	51.7	56.7	61.7	66.7	66.7	21.4	29.6	33.8	38.0	43.2	49.4	56.6	56.6
200	39191	-28.1	-18.3	-7.6	-3.2	-1.5	-0.5	21.3	41.3	46.3	51.3	56.3	61.3	66.3	71.3	71.3	17.1	25.3	30.3	35.3	40.3	45.3	50.3	50.3
175	41949	-20.4	-11.7	-2.2	7.4	14.9	23.5	41.3	59.1	64.1	69.1	74.1	79.1	84.1	89.1	89.1	17.4	25.6	30.6	35.6	40.6	45.6	50.6	50.6
150	45118	-14.6	-7.0	-1.3	9.6	16.1	23.7	41.3	59.7	64.7	69.7	74.7	79.7	84.7	89.7	89.7	18.4	26.6	31.6	36.6	41.6	46.6	51.6	51.6
125	48175	-12.0	-5.3	2.0	9.3	15.0	21.7	38.5	57.5	62.5	67.5	72.5	77.5	82.5	87.5	87.5	19.4	27.6	32.6	37.6	42.6	47.6	52.6	52.6
100	53223	-11.3	-5.7	5.5	6.6	11.4	17.0	28.5	40.0	45.0	50.0	55.0	60.0	65.0	70.0	70.0	20.4	28.4	33.4	38.4	43.4	48.4	53.4	53.4
80	57776	-14.1	-9.2	-3.9	1.5	5.6	10.5	20.4	30.3	35.2	40.2	45.2	50.2	55.2	60.2	65.2	20.4	28.4	33.4	38.4	43.4	48.4	53.4	53.4
70	60456	-20.4	-15.5	-10.0	-4.6	-0.3	4.7	14.9	25.1	30.1	35.1	40.1	45.1	50.1	55.1	55.1	17.4	25.6	30.6	35.6	40.6	45.6	50.6	50.6
60	63550	-22.6	-17.9	-12.6	-7.7	-3.5	-0.9	10.3	19.7	24.4	28.3	33.4	38.5	43.5	48.5	48.5	18.4	26.6	31.6	36.6	41.6	46.6	51.6	51.6
50	67247	-27.5	-22.8	-17.7	-12.5	-7.5	-2.5	5.4	15.4	20.1	24.1	29.3	34.4	39.4	44.4	44.4	21.4	29.6	34.6	39.6	44.6	49.6	54.6	54.6
40	71814	-34.6	-29.5	-21.9	-16.3	-13.9	-8.6	1.7	12.2	17.3	21.7	27.3	32.9	38.0	44.0	44.0	22.4	30.6	35.6	40.6	45.6	50.6	55.6	55.6
30	77759	-41.4	-37.2	-30.4	-23.7	-16.4	-12.2	-6.4	12.2	17.0	21.0	26.0	31.2	36.0	41.2	41.2	23.4	31.6	36.6	41.6	46.6	51.6	56.6	56.6
25	81565	-49.3	-42.3	-36.7	-27.1	-16.5	-11.2	-6.2	11.2	16.0	21.0	26.0	31.2	36.0	41.2	41.2	24.4	32.6	37.6	42.6	47.6	52.6	57.6	57.6
20	86263	-56.4	-47.0	-40.5	-30.0	-22.4	-15.6	-7.2	11.2	16.0	21.0	26.0	31.2	36.0	41.2	41.2	25.4	33.6	38.6	43.6	48.6	53.6	58.6	58.6
15	92375	-57.9	-49.2	-39.7	-30.2	-22.6	-14.1	-3.6	21.3	26.0	31.0	36.0	41.0	46.0	51.0	51.0	26.4	34.6	39.6	44.6	49.6	54.6	59.6	59.6
10	10119	-62.9	-52.1	-40.7	-29.2	-20.2	-9.6	11.6	33.4	44.0	53.0	61.5	66.5	71.1	76.1	76.1	31.4	37.4	43.4	49.4	55.4	61.5	66.5	66.5

NOTE == POSITIVE COMPONENTS ARE FROM THE WEST.

Table 19. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: January

NO. OBSERVATIONS == SURFACE == 676, TOP == 326

PRESSURE LEVEL (mb)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)					MEAN	+1SD	-1SD	95.0	97.73	99.0
		1.0	2.25	5.0	10.0	15.47						
SFC	571	-17.9	-15.9	-13.7	-11.6	-9.9	-7.9	-3.9	.1	2.1	3.8	5.9
950	1929	-27.2	-24.0	-20.5	-17.0	-14.3	-11.9	-4.0	1.9	5.1	7.8	11.3
900	3415	-23.0	-20.2	-17.1	-14.0	-11.6	-8.8	-3.0	2.8	5.6	8.0	11.1
850	4970	-25.5	-22.4	-19.0	-15.6	-13.0	-9.9	-3.6	2.7	5.8	8.4	11.8
800	6604	-29.0	-25.5	-21.7	-17.9	-15.0	-11.5	-4.5	2.5	6.0	8.9	12.7
750	8323	-32.9	-29.0	-24.7	-20.4	-17.1	-13.2	-5.2	2.8	6.7	10.0	14.3
700	10151	-36.8	-32.3	-27.4	-22.6	-18.6	-14.3	-5.3	3.7	8.2	12.0	16.8
650	12077	-39.8	-34.9	-29.6	-24.3	-20.2	-15.3	-5.5	4.3	9.2	12.3	16.8
600	14147	-44.6	-39.1	-33.1	-27.1	-22.4	-16.9	-5.7	5.5	11.0	15.7	21.7
550	16335	-49.1	-43.0	-36.3	-30.7	-24.5	-18.4	-6.0	6.4	12.5	17.7	27.7
500	18720	-52.9	-46.3	-39.1	-32.0	-26.4	-19.8	-6.5	6.8	13.4	19.0	31.0
450	21270	-57.1	-50.0	-42.3	-34.5	-28.5	-21.4	-7.0	7.4	14.5	20.5	33.3
400	24085	-62.5	-54.7	-46.2	-37.7	-31.1	-23.3	-7.5	8.3	16.1	22.7	36.0
350	27165	-71.3	-62.4	-52.7	-43.0	-35.4	-26.6	-9.7	16.1	22.7	31.2	43.1
300	30610	-77.1	-67.4	-56.9	-46.3	-38.1	-28.4	-8.4	8.6	16.6	21.2	35.9
250	34541	-82.5	-72.1	-60.8	-49.5	-40.7	-30.3	-9.3	11.7	20.5	28.7	39.3
200	39193	-80.8	-70.7	-59.6	-48.6	-40.0	-29.9	-9.3	11.3	22.1	30.7	42.2
175	41949	-72.2	-63.1	-53.2	-43.3	-35.6	-26.6	-8.1	10.3	19.4	27.1	37.0
150	45118	-62.1	-54.3	-45.8	-37.3	-30.7	-22.9	-7.1	8.7	16.5	23.1	31.6
125	48815	-53.8	-47.1	-39.8	-32.5	-26.4	-20.1	-6.5	7.1	13.8	19.5	40.1
100	53323	-43.4	-38.0	-32.1	-26.2	-21.6	-16.2	-5.2	5.8	11.2	15.8	27.6
80	57776	-33.4	-29.2	-24.7	-20.1	-16.6	-12.4	-4.0	4.4	8.6	12.1	21.2
70	60446	-27.9	-24.6	-21.0	-17.5	-14.7	-11.4	-4.8	5.1	7.9	11.4	25.4
60	63550	-24.7	-21.7	-18.5	-15.2	-12.7	-9.7	-3.7	2.3	5.3	7.8	17.3
50	67247	-22.2	-19.6	-16.7	-13.8	-11.6	-9.0	-3.6	4.8	6.4	9.5	12.4
40	71814	-20.7	-18.2	-15.5	-12.7	-10.5	-8.1	-3.0	2.1	4.6	6.7	14.7
30	77759	-22.8	-20.1	-17.2	-14.3	-12.0	-9.3	-3.9	1.5	4.2	6.5	12.3
25	81565	-25.4	-22.4	-19.1	-15.8	-13.2	-10.2	-4.0	2.2	5.2	7.8	15.0
20	86253	-28.9	-25.3	-21.4	-17.5	-14.4	-10.8	-3.5	3.8	7.4	10.5	17.4
15	92375	-32.8	-28.6	-24.1	-19.5	-16.0	-11.8	-3.4	5.0	9.2	12.7	21.9
10	101109	-39.0	-33.7	-27.9	-22.2	-17.7	-12.4	-1.7	4.0	14.3	18.8	24.5

NOTE == POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 2C. Cumulative Frequency Distribution of Upper Winds (Scalari) at Standard Pressure Levels for San Nicolas Island: February
NO. OBSERVATIONS = SURFACE = 623; TOP = 321

PRESSURE LEVEL (IMBS)	MEAN HEIGHT (IFT)	SCALAR WIND SPEED (KNOTS)											
		1.0	2.28	5.0	10.0	15.47	25.0	50.0	75.0	84.13	90.0	95.0	97.73
SFC	571	0	0	0	1.5	3.9	8.4	13.7	16.1	18.1	20.8	23.4	25.8
950	1916	0	0	1.0	3.7	6.9	13.4	19.9	23.1	25.8	29.3	32.8	36.0
900	3406	0	0	2.1	4.3	6.9	12.1	17.3	19.9	22.1	24.9	27.7	30.3
850	4964	0	0	3.4	5.6	8.2	13.4	18.6	21.2	23.4	26.2	29.0	31.6
800	6601	0	0	4.3	6.8	9.7	15.7	21.7	24.6	27.1	30.3	33.5	36.4
750	8327	0	0	5.6	7.4	10.9	18.1	25.3	28.8	31.9	35.6	39.5	43.0
700	10157	1.6	5.7	6.8	12.5	20.0	27.5	31.2	34.3	38.4	42.4	46.1	49.8
650	12087	2.2	6.8	10.3	14.5	22.9	31.3	35.5	39.0	43.6	46.1	52.3	57.3
600	14157	3.3	8.2	12.0	16.5	25.6	34.7	39.2	43.0	47.9	52.6	57.3	63.6
550	16348	3.9	9.2	13.4	18.3	28.3	38.3	43.2	47.4	52.7	58.1	63.6	67.8
500	18727	5.5	11.1	15.5	20.7	31.2	41.7	46.9	51.3	56.9	62.6	67.8	73.5
450	21260	6.8	12.9	17.6	23.1	34.4	45.7	51.2	55.9	62.0	66.0	70.7	83.0
400	24045	7.2	14.1	19.4	25.7	38.5	51.3	57.6	62.9	69.8	76.7	83.0	94.4
350	27162	7.5	15.4	21.6	28.9	43.6	58.3	65.6	71.8	79.7	87.6	100.6	124.7
300	30600	9.6	18.6	25.6	33.8	50.6	67.3	75.6	82.6	91.6	105.0	115.3	129.4
250	34524	9.9	11.2	21.5	29.5	38.9	58.1	77.3	86.7	96.7	109.3	119.9	129.4
200	39160	4.7	15.1	25.4	33.5	43.0	62.3	81.6	91.1	99.2	109.3	119.9	129.4
175	41946	4.8	14.7	24.5	32.2	41.2	59.6	78.0	87.0	94.7	104.5	116.4	123.4
150	45131	7.5	15.9	24.3	30.9	39.6	54.6	70.0	77.7	84.3	92.7	101.1	108.8
125	48858	1.0	7.7	15.9	22.2	30.6	48.1	61.6	68.3	74.0	81.2	89.5	95.2
100	53356	.7	6.0	11.8	17.6	22.1	27.4	38.2	49.0	54.3	64.6	70.4	75.7
80	57812	1.1	6.1	11.1	15.0	19.6	28.9	38.2	42.6	46.7	51.7	56.7	61.3
70	60476	1.1	4.7	8.4	11.2	14.5	21.3	28.1	31.4	34.2	37.9	41.5	44.8
60	63570	0	0	3.7	6.8	10.4	17.6	25.2	28.8	31.9	35.8	39.8	43.4
50	67251	0	0	1.9	4.7	6.0	14.7	21.4	24.7	27.5	31.1	35.7	38.6
40	71804	1.6	4.6	4.1	7.1	13.1	19.1	22.1	24.6	27.9	31.1	34.1	40.4
30	77746	0	0	3.5	7.2	14.7	22.2	25.9	29.0	33.1	37.1	40.4	42.1
25	81575	0	0	4.1	7.9	15.4	23.1	26.9	30.1	34.2	37.9	40.4	43.4
20	86290	0	0	4.4	9.3	19.1	28.9	32.8	37.9	43.4	48.8	55.8	62.7
15	92497	0	0	4.8	11.2	24.1	37.0	43.4	48.8	53.7	60.2	66.7	76.7
10	101266	0	0	6.7	13.2	51.0	59.7	67.1	76.7	80.2	84.0	88.5	94.9

Table 21. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: February

NO. OBSERVATIONS -- SURFACE = 623. TOP = 321

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)												
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 MEAN	50.0 MEAN	84.3 +1SD	90.0 MEAN	95.0 MEAN			
SFC	571	-10.0	-8.0	-5.8	-3.6	-1.9	.1	4.2	8.3	10.3	12.0	14.2	16.4	18.4
950	1916	-21.1	-17.5	-13.6	-9.7	-6.6	-3.0	4.3	11.6	16.3	22.2	26.1	29.7	
900	3456	-20.3	-17.0	-13.4	-9.9	-7.1	-3.8	2.8	9.4	12.7	15.5	19.9	22.6	25.9
850	4964	-20.6	-17.2	-13.5	-9.9	-7.0	-3.6	3.2	10.0	13.4	16.3	19.9	23.6	27.0
800	6601	-20.4	-16.8	-12.8	-8.9	-5.8	-2.8	5.2	12.6	16.2	19.3	23.2	27.2	30.8
750	8327	-20.6	-16.7	-12.4	-8.1	-4.8	-0.9	7.1	15.1	19.0	22.3	26.6	30.9	34.8
700	10157	-20.6	-16.4	-11.8	-7.2	-3.6	.6	9.2	17.8	22.0	25.6	30.2	34.8	39.0
650	12087	-21.8	-17.0	-11.8	-6.6	-2.6	2.2	11.4	21.4	26.4	30.2	34.6	40.6	45.4
600	14157	-21.2	-16.2	-10.7	-5.3	-1.0	4.0	14.2	24.4	29.4	33.7	39.1	44.6	49.4
550	16348	-22.0	-16.5	-10.5	-4.5	-1.2	5.7	16.9	28.1	33.6	38.3	44.3	50.3	55.8
500	18727	-22.5	-16.4	-10.1	-3.6	1.4	7.3	19.4	31.5	37.4	42.4	48.9	55.4	61.3
450	21240	-23.9	-17.3	-10.2	-3.1	2.4	6.9	22.1	35.3	41.8	47.3	54.4	61.5	68.0
400	24085	-26.6	-19.2	-11.2	-7.1	3.1	10.5	25.4	40.3	47.7	53.9	62.0	70.0	77.4
350	27162	-20.4	-12.0	-7.9	-4.2	12.5	29.5	46.5	54.8	61.9	71.0	80.1	86.4	91.9
300	30600	-33.5	-23.8	-13.2	-2.6	5.7	15.4	35.2	55.0	64.7	73.0	83.6	94.2	101.9
250	34524	-36.2	-25.0	-12.8	-0.6	8.9	20.1	42.8	65.5	76.7	86.2	98.4	110.6	121.8
200	39140	-35.1	-24.3	-12.6	-2.6	19.3	29.1	50.7	72.7	92.6	104.4	116.1	126.9	138.4
175	41946	-38.5	-8.7	2.0	12.7	21.0	30.8	50.7	70.6	80.4	88.7	99.4	110.1	119.9
150	45131	-7.4	3.3	8.7	17.1	23.6	31.3	46.9	62.5	70.2	76.7	85.1	93.5	101.2
125	48858	-10.1	-2.7	5.4	13.4	19.7	21.1	42.1	57.1	64.5	70.3	78.8	86.9	94.3
100	53356	-78.8	-7.7	10.2	15.3	21.3	23.4	45.5	51.5	56.6	63.1	69.6	75.6	81.9
80	57812	-10.5	-5.5	-0.1	5.3	9.5	14.4	24.5	34.5	39.5	43.7	49.1	54.5	59.5
70	60476	-10.8	-6.9	-2.6	1.7	5.0	8.9	16.9	24.9	28.8	32.1	36.4	40.7	44.6
60	63570	-17.5	-13.2	-8.5	-3.8	-0.2	4.1	12.8	21.5	25.8	29.4	34.1	38.8	43.1
50	67251	-23.5	-19.1	-14.3	-9.6	-5.9	-1.5	7.3	16.1	20.5	24.2	28.9	33.7	38.1
40	71804	-27.6	-23.2	-18.4	-13.6	-9.8	-5.4	3.6	12.6	17.0	20.8	25.6	30.4	34.8
30	77746	-36.1	-30.6	-24.6	-18.5	-13.6	-8.3	3.0	14.3	19.8	24.5	30.6	36.8	42.1
25	81575	-38.6	-32.7	-26.3	-19.9	-14.9	-9.0	2.9	14.8	20.7	25.7	32.1	38.5	44.4
20	86240	-47.5	-40.1	-32.0	-23.9	-17.6	-10.2	4.9	20.0	27.4	33.7	41.8	49.9	57.3
15	92457	-56.3	-47.0	-36.8	-26.7	-18.8	-9.5	9.4	28.3	37.6	45.5	55.6	65.8	75.1
10	101266	-68.2	-55.9	-42.5	-29.1	-18.4	-6.4	3.4	55.7	66.1	79.5	92.9	105.2	119.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 22. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: February

NO. OBSERVATIONS -- SURFACE = 623, TOP = 321

PRESSURE LEVEL (WBPS)	MEAN HEIGHT (ft)	SURFACE			15.0			MERRIDIONAL WIND SPEED (KNOTS)			95.0			97.73			99.0		
		1.0	2.72	5.0	10.0	15.0	25.0	50.0	75.0	A ⁶ .13 +15D	90.0	95.0	A ⁶ .13 +15D	97.73	A ⁶ .13 +15D	99.0	A ⁶ .13 +15D		
SFC	571	-21.9	-19.5	-16.8	-14.2	-12.1	-9.7	-4.7	-3	-2.7	-4.8	-7.4	-10.1	-12.5	-13.7	-17.0	-17.0		
950	1916	-29.2	-25.9	-22.3	-18.8	-16.0	-12.7	-6.1	-5	-3.8	-6.6	-10.1	-13.7	-16.7	-17.0	-17.0	-17.0		
900	3606	-25.3	-22.3	-19.1	-15.8	-13.3	-10.3	-4.3	-1.7	-4.7	-7.2	-10.5	-13.7	-16.7	-17.0	-17.0	-17.0		
850	4944	-28.5	-25.2	-21.6	-18.6	-15.2	-11.9	-5.2	-1.5	-4.8	-7.6	-11.2	-14.6	-18.1	-18.1	-18.1	-18.1		
800	6601	-33.8	-29.6	-25.7	-21.5	-18.2	-14.3	-6.5	-1.3	-5.2	-8.5	-12.7	-16.9	-20.8	-20.8	-20.8	-20.8		
750	8327	-39.9	-35.3	-30.3	-25.3	-21.4	-16.8	-7.5	-1.8	-6.4	-10.3	-15.3	-20.3	-24.8	-24.8	-24.8	-24.8		
700	10157	-42.2	-37.3	-32.0	-26.6	-22.5	-17.6	-7.7	-2.2	-7.1	-11.2	-16.6	-21.9	-26.8	-26.8	-26.8	-26.8		
650	12087	-46.5	-41.1	-35.2	-29.3	-24.7	-19.3	-8.3	-2.7	-8.1	-12.7	-18.6	-24.5	-29.9	-29.9	-29.9	-29.9		
600	14157	-51.1	-45.1	-38.5	-32.9	-26.9	-20.9	-8.7	-3.5	-9.5	-14.6	-21.1	-27.7	-33.7	-33.7	-33.7	-33.7		
550	16348	-42.9	-38.1	-32.9	-27.7	-23.6	-18.8	-9.1	-4.6	-5.4	-9.5	-14.7	-19.9	-24.7	-24.7	-24.7	-24.7		
500	18227	-58.0	-51.1	-43.6	-36.1	-30.3	-23.4	-9.5	-4.4	-11.3	-17.1	-24.6	-32.1	-39.0	-39.0	-39.0	-39.0		
450	21210	-61.6	-54.3	-46.3	-38.3	-32.1	-24.8	-9.9	-5.0	-12.3	-18.5	-26.5	-34.5	-41.8	-41.8	-41.8	-41.8		
400	24085	-67.5	-59.4	-50.6	-41.8	-36.9	-26.8	-10.4	-6.0	-14.1	-21.9	-29.9	-38.6	-46.7	-46.7	-46.7	-46.7		
350	27162	-75.2	-66.7	-56.3	-46.5	-36.8	-29.8	-11.4	-7.0	-16.0	-23.7	-33.5	-43.4	-52.4	-52.4	-52.4	-52.4		
300	30600	-83.3	-73.2	-62.2	-51.2	-42.7	-32.6	-12.2	-8.2	-18.3	-26.8	-37.8	-48.8	-58.9	-58.9	-58.9	-58.9		
250	34524	-98.3	-77.5	-65.9	-53.9	-44.7	-33.9	-11.9	-6.1	-20.9	-30.1	-41.9	-53.7	-64.5	-64.5	-64.5	-64.5		
200	39180	-103.6	-82.4	-62.3	-51.2	-42.6	-32.4	-11.8	-6.8	-19.9	-27.6	-38.7	-49.8	-60.0	-60.0	-60.0	-60.0		
175	41946	-73.6	-64.9	-55.2	-45.6	-38.1	-29.3	-11.4	-6.5	-15.3	-22.8	-32.4	-42.0	-50.8	-50.8	-50.8	-50.8		
150	45131	-63.9	-56.3	-48.0	-39.7	-33.7	-25.6	-10.1	-5.4	-13.0	-19.5	-27.9	-36.1	-43.7	-43.7	-43.7	-43.7		
125	48886	-53.4	-47.1	-40.3	-33.4	-28.1	-22.4	-9.1	-3.6	-9.9	-15.2	-22.1	-28.9	-35.2	-35.2	-35.2	-35.2		
100	53356	-42.4	-37.4	-32.0	-26.9	-22.4	-17.5	-7.4	-2.6	-7.6	-11.8	-17.2	-22.6	-27.5	-27.5	-27.5	-27.5		
80	57812	-35.9	-31.4	-27.3	-22.9	-19.4	-15.3	-7.0	-1.3	-5.4	-8.9	-13.3	-17.8	-21.9	-21.9	-21.9	-21.9		
70	60176	-28.1	-25.1	-21.6	-18.5	-15.9	-12.9	-6.7	-0.5	-2.5	-5.1	-8.4	-11.7	-14.7	-14.7	-14.7	-14.7		
60	63510	-25.7	-22.9	-19.8	-16.8	-13.4	-11.6	-5.9	-0.2	-2.6	-5.0	-8.0	-11.1	-13.9	-13.9	-13.9	-13.9		
50	67251	-23.1	-20.6	-17.9	-15.2	-13.1	-10.6	-5.6	-0.6	-1.9	-4.0	-6.7	-9.4	-11.2	-11.2	-11.2	-11.2		
40	71804	-19.6	-17.4	-15.0	-12.6	-10.6	-8.6	-4.2	-1.2	-2.2	-4.2	-6.6	-9.0	-10.1	-12.2	-12.2	-12.2		
30	77746	-17.6	-15.5	-13.2	-10.9	-9.1	-7.0	-2.7	-1.6	-3.7	-5.5	-7.8	-10.1	-12.2	-12.2	-12.2	-12.2		
25	81175	-17.1	-15.1	-12.9	-10.9	-9.1	-7.0	-2.7	-1.6	-3.5	-5.2	-7.5	-9.7	-11.7	-14.9	-14.9	-14.9		
20	86220	-18.1	-15.6	-13.2	-10.7	-9.7	-6.4	-1.6	-0.7	-1.6	-3.2	-5.5	-7.5	-10.0	-12.6	-12.6	-12.6		
15	92557	-20.2	-17.5	-14.5	-11.6	-9.3	-6.6	-1.1	-0.4	-1.1	-3.2	-5.2	-7.1	-9.7	-12.3	-12.3	-12.3		
10	101246	-22.1	-19.1	-15.8	-12.5	-10.0	-7.0	-0.9	-0.2	-0.9	-2.2	-4.0	-6.2	-14.0	-17.3	-17.3	-17.3		

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 23. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: March
NO. OBSERVATIONS == SURFACE == 755. TOP == 362

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)									
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -50	50.0 MEAN	75.0 +150	90.0 +150	95.0 +250
SFC	571	0	0	1.2	3.1	5.8	10.8	15.8	20.4	23.1	26.8
950	1850	0	0	1.7	4.5	7.8	14.5	21.2	26.5	30.9	34.5
900	3163	0	0	2.2	4.4	7.0	12.3	17.6	20.2	22.4	25.3
850	4918	0	0	3.7	5.9	8.5	13.8	19.1	21.7	23.9	26.8
800	6552	0	0	1.3	4.5	7.0	9.9	15.9	24.6	27.3	30.5
750	8221	0	0	2.0	5.5	8.3	11.6	16.2	24.8	26.1	30.9
700	10055	0	0	2.4	6.5	9.6	13.3	20.8	28.3	32.0	34.4
650	12021	0	0	2.6	7.3	10.9	15.2	23.8	32.4	36.7	43.2
600	14098	0	0	2.9	8.2	12.3	17.2	27.2	36.8	41.7	45.0
550	16226	0	0	3.4	9.3	13.9	19.3	30.3	41.3	46.7	51.3
500	18652	0	0	4.3	10.8	15.8	21.7	33.4	45.9	51.8	56.8
450	21201	0	0	4.4	11.7	17.4	24.1	37.7	51.3	63.7	71.0
400	24013	0	0	4.4	12.6	16.9	26.4	41.5	56.6	64.1	76.6
350	27077	0	0	5.5	14.7	21.6	30.2	47.3	64.4	72.8	79.9
300	30512	0	0	7.8	17.7	25.4	34.5	52.9	71.3	80.4	89.1
250	34412	0	0	9.2	20.1	28.5	38.4	58.6	78.8	88.7	98.0
200	39681	0	0	3.7	14.1	24.6	32.7	42.3	61.7	81.1	108.0
175	41877	0	0	8.1	17.4	26.7	34.0	42.5	69.9	90.7	109.3
150	45050	1.2	9.0	17.5	26.0	32.6	40.4	56.2	72.0	85.8	102.4
125	48777	3.4	9.9	17.0	24.0	29.5	36.0	49.1	62.2	79.8	96.4
100	53224	6.2	12.3	18.4	23.1	28.7	40.0	51.3	56.9	61.6	81.2
80	57792	0	4.7	10.2	14.5	19.5	29.8	40.1	45.1	49.4	54.9
70	60476	0	2.5	7.0	10.6	14.8	23.3	31.8	36.0	39.6	44.1
60	63612	0	0.5	4.3	7.2	10.7	17.7	24.7	28.2	31.1	34.9
50	67220	0	0	1.3	4.0	7.1	13.5	19.9	23.0	25.7	29.1
40	71916	0	0	0	2.2	5.4	11.9	18.4	21.6	24.3	27.9
30	77913	0	0	0	0	2.7	5.7	12.8	19.9	23.4	26.4
25	81752	0	0	0	0	3.6	7.3	14.9	22.5	26.2	30.2
20	86556	0	0	0	0	2.4	5.9	10.0	18.3	26.6	33.4
15	92207	0	0	0	0	3.6	6.2	13.4	23.9	34.4	37.5
10	101608	0	0	4.8	10.9	16.9	24.8	32.7	47.3	54.5	60.6

Table 24. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: March
NO. OBSERVATIONS = SURFACE = 755. TOP = 362

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	NO. OF OBSERVATIONS					ZONAL WIND SPEED (KNOTS)				
		-250	-50	100	150	200	250	300	350	400	500
SFC	571	-9.1	-7.1	-4.7	-2.3	-0.5	1.7	6.1	10.5	12.7	14.5
950	1680	-17.2	-13.6	-10.1	-6.4	-3.5	-0.1	6.8	13.7	17.1	20.0
900	3363	-16.9	-13.4	-10.5	-7.1	-4.5	-1.4	6.8	11.0	14.1	16.7
850	4916	-17.3	-14.1	-10.6	-7.0	-4.3	-1.1	5.5	12.1	15.3	18.0
800	6552	-18.6	-14.9	-10.9	-6.9	-3.8	-0.1	7.3	14.7	18.4	21.5
750	8271	-19.3	-15.2	-10.7	-6.3	-2.8	-1.3	9.6	17.9	22.0	25.5
700	10095	-20.5	-15.9	-10.9	-5.9	-2.0	2.6	11.9	21.2	25.8	29.7
650	12021	-22.2	-17.0	-11.3	-5.6	-1.2	4.9	14.6	25.2	30.4	34.8
600	14048	-23.6	-17.4	-11.4	-5.1	-0.1	5.7	17.6	29.5	35.3	40.3
550	16276	-23.9	-17.6	-10.7	-3.8	1.6	7.9	20.8	33.7	40.0	45.4
500	18652	-25.0	-16.1	-10.5	-3.0	2.9	9.6	23.9	38.0	44.9	50.8
450	21201	-26.1	-18.5	-10.2	-1.9	4.5	12.1	21.5	42.9	50.5	56.9
400	24603	-28.1	-19.7	-10.6	-1.4	5.7	14.1	31.1	48.1	56.5	63.6
350	27077	-30.5	-20.1	-10.8	-0.6	7.4	16.8	35.9	55.0	64.4	72.4
300	30512	-30.2	-20.1	-9.0	-2.0	10.6	20.7	41.3	61.9	72.0	80.6
250	34432	-26.2	-17.5	-5.8	5.9	16.0	25.7	47.5	69.3	80.0	89.1
200	39041	-16.0	-6.2	4.5	15.3	27.6	33.4	51.4	73.4	83.2	91.5
175	41817	-16.1	-1.2	6.6	18.3	25.9	34.8	53.0	71.2	80.1	87.7
150	45020	-7.0	-1.2	10.1	19.0	25.0	34.1	50.6	67.1	75.3	82.2
125	48757	-3.5	3.3	10.7	18.1	23.9	30.7	44.5	58.3	65.1	76.3
100	52284	-4.5	1.3	7.6	14.9	16.9	24.7	36.5	48.3	54.1	59.0
80	57782	-9.9	-4.7	1.0	16.7	11.1	16.3	26.9	37.5	42.7	52.8
70	66476	-10.3	-5.9	-1.1	3.6	7.3	11.7	20.5	29.3	33.7	42.1
60	63602	-13.7	-9.7	-5.3	-1.1	2.4	6.4	14.6	22.6	25.6	30.8
50	63320	-17.4	-13.6	-9.5	-5.3	-2.1	1.7	9.4	17.1	20.9	24.1
40	71916	-25.0	-20.7	-16.0	-11.3	-7.1	-3.4	5.3	14.6	18.3	21.9
30	77113	-36.1	-25.2	-19.9	-14.5	-10.4	-5.5	4.4	14.3	19.2	23.3
25	81742	-33.9	-22.3	-12.3	-7.1	-1.1	-5.8	5.5	16.8	22.4	27.1
20	86506	-38.6	-32.1	-25.0	-17.8	-12.3	-5.8	7.5	20.8	27.3	32.8
15	92207	-45.5	-37.3	-28.4	-19.5	-12.6	-4.4	12.1	36.8	43.7	52.6
10	101608	-53.3	-40.8	-31.4	-19.9	-11.0	-0.5	42.1	52.6	61.5	73.0

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 25. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: March

NO. OBSERVATIONS -- SURFACE = 755. TOP = 362

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)										
		1.0	2-2A	5.0	10.0	15.0	25.0	50.0	75.0	84-13	90.0	95.0
SFC	571	-23.4	-20.9	-18.2	-15.4	-13.3	-10.8	-5.7	-0.6	1.9	4.0	6.6
950	18A0	-31.6	-28.0	-24.1	-20.2	-17.1	-13.5	-6.2	1.1	4.7	7.8	9.5
900	3363	-25.9	-22.8	-19.4	-16.0	-13.4	-10.3	-4.0	2.3	5.4	8.0	11.7
850	4918	-28.2	-27.4	-21.1	-17.5	-14.6	-11.2	-4.4	2.4	5.8	8.7	12.3
800	6552	-31.5	-29.3	-25.8	-23.6	-19.5	-16.3	-12.5	-4.9	2.7	6.5	9.7
750	8271	-34.5	-30.3	-25.8	-21.2	-17.7	-13.5	-10.1	-5.1	3.3	7.5	11.0
700	10095	-37.8	-33.1	-28.0	-22.9	-19.0	-14.3	-10.9	-4.9	4.5	9.2	13.1
650	12021	-41.6	-36.4	-30.7	-25.1	-20.7	-15.5	-10.5	-5.0	5.5	10.7	15.1
600	14068	-45.0	-39.3	-33.1	-26.9	-22.1	-16.4	-11.1	-5.4	6.6	12.3	17.1
550	16276	-49.1	-42.8	-36.0	-29.1	-23.8	-17.5	-12.2	-5.9	6.6	12.3	17.1
500	16652	-53.1	-46.2	-38.7	-31.2	-25.3	-18.4	-13.1	-6.4	7.9	14.2	19.5
450	21201	-58.0	-50.4	-42.2	-33.9	-27.5	-21.5	-16.9	-7.5	9.6	16.5	22.4
400	24003	-61.9	-53.8	-45.0	-36.2	-29.3	-23.2	-18.2	-8.6	10.7	18.3	24.7
350	27077	-69.1	-60.0	-50.1	-40.1	-32.4	-23.3	-18.8	-10.8	11.6	19.7	26.6
300	30512	-73.9	-66.0	-53.2	-42.5	-34.1	-24.2	-19.2	-12.2	13.7	22.6	30.5
250	34432	-78.1	-67.6	-56.2	-44.7	-35.8	-25.3	-19.3	-12.2	15.6	24.7	34.1
200	39081	-72.9	-63.0	-52.2	-41.4	-33.0	-23.1	-17.1	-10.4	17.3	27.8	36.7
175	41837	-64.0	-55.2	-45.6	-35.9	-28.4	-21.1	-16.4	-10.6	17.1	27.0	35.4
150	45020	-55.1	-47.4	-39.0	-30.6	-24.1	-16.1	-11.8	-7.8	16.4	25.2	32.7
125	48757	-46.4	-39.9	-32.8	-25.7	-20.2	-13.7	-10.5	-6.5	12.7	19.2	24.7
100	53284	-31.5	-25.8	-20.2	-15.8	-10.6	-8.0	-5.1	-1.0	10.4	15.6	20.0
80	57782	-28.7	-24.7	-20.3	-15.9	-12.5	-9.5	-6.3	-3.0	7.9	11.9	15.3
70	60476	-24.9	-21.4	-17.6	-13.8	-10.8	-7.3	-4.0	-0.2	6.9	10.4	13.4
60	636n2	-19.4	-16.7	-13.8	-10.9	-8.6	-5.9	-2.6	-0.5	4.9	7.6	10.4
50	67320	-17.7	-15.4	-12.8	-10.3	-8.3	-6.0	-2.0	-1.7	3.6	5.9	7.9
40	71916	-15.4	-13.4	-11.2	-8.9	-7.2	-5.2	-1.0	-0.5	3.2	5.2	6.9
30	77913	-14.5	-12.5	-10.3	-8.2	-6.5	-4.5	-0.5	-0.5	3.5	5.5	7.2
25	81762	-13.8	-11.9	-9.8	-7.7	-6.0	-4.0	-0.1	-0.1	3.9	5.8	7.5
20	86506	-15.0	-12.9	-10.6	-8.4	-6.6	-4.5	-0.3	-0.3	3.9	6.0	7.8
15	927n7	-18.3	-15.7	-12.8	-9.9	-7.7	-5.1	-0.3	-0.3	5.7	8.3	10.5
10	101608	-23.5	-20.1	-16.4	-12.6	-9.7	-6.3	-0.3	-0.3	7.7	11.1	14.0
												21.5
												24.9

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 26. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: April

NO. OBSERVATIONS -- SURFACE = 679. TOP = 366

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	SCALAR WIND SPEED (INCHES)									
		1.0 -250	2.0 -250	5.0 -250	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 -150	90.0 -150	95.0 -150
SFC	571	0	0	1.0	2.0	5.2	9.8	14.4	16.7	18.6	21.1
950	1850	0	0	1.5	4.2	7.4	13.9	20.4	23.6	26.3	29.8
900	3317	0	0	1.9	4.1	6.7	12.1	17.5	20.1	22.3	25.2
850	4898	0	0	1.9	4.1	8.3	13.3	18.3	20.8	22.9	26.1
800	6519	0	0	1.9	4.8	7.1	9.8	15.2	20.6	23.3	25.6
750	8264	0	0	2.0	5.4	6.0	11.1	17.4	23.7	27.8	32.4
700	10102	0	0	1.6	5.7	8.8	12.5	20.9	27.5	31.2	34.3
650	12034	0	0	1.9	5.8	9.6	14.0	23.0	32.0	36.4	40.2
600	14111	0	0	1.9	6.5	10.6	15.9	26.7	36.7	41.8	46.1
550	16312	0	0	1.7	7.0	12.0	17.8	29.7	41.6	47.4	52.4
500	18701	0	0	1.4	7.0	12.0	17.8	29.7	41.6	47.4	52.4
450	21263	0	0	1.6	8.7	13.3	20.0	33.5	47.0	59.4	66.4
400	24085	0	0	1.5	10.5	14.9	22.3	37.2	52.1	59.5	65.7
350	27178	0	0	2.5	17.2	25.2	41.3	57.4	65.4	72.1	80.5
300	30636	0	0	1.1	11.9	19.3	28.0	45.6	63.2	71.9	79.3
250	34577	0	0	4.8	14.9	22.8	32.0	51.0	69.9	79.2	87.1
200	39236	0	0	7.8	16.0	26.0	35.4	54.4	73.4	82.8	90.8
175	41772	0	0	4.2	11.1	20.8	37.3	55.5	73.7	82.6	90.6
150	45154	0	0	7.0	14.6	22.1	28.6	36.7	53.0	69.3	73.7
125	46891	2.3	8.1	14.4	20.8	31.5	43.3	55.1	63.1	70.0	75.9
100	53412	5.1	10.2	15.4	19.4	24.1	33.7	43.3	52.0	60.9	68.7
80	57949	0.2	4.5	8.6	12.1	16.0	24.0	32.0	35.9	43.2	51.7
70	60653	0	0	4.5	7.7	11.1	17.5	25.2	31.7	38.7	42.8
60	63796	0	0	4.6	13.0	21.8	36.7	53.0	69.3	84.2	93.0
50	67516	0	0	4.6	14.6	22.1	28.0	49.0	63.1	70.0	83.4
40	72152	0	0	4.4	14.4	20.8	25.7	43.3	55.1	67.2	76.5
30	78205	0	0	4.0	10.2	15.0	24.1	33.7	43.3	52.0	60.9
25	82040	0	0	4.5	8.6	12.1	16.0	24.0	32.0	39.2	47.8
20	86860	0	0	4.8	9.0	13.0	17.0	25.2	31.7	38.7	42.8
15	73110	0	0	4.6	9.6	15.1	21.4	34.4	42.4	50.0	56.7
10	102104	0	0	4.2	6.2	9.8	14.0	22.5	31.0	35.2	43.3

Table 27. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: April

NO. OBSERVATIONS -- SURFACE = 679, TOP = 396

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	ZONAL WIND SPEED (KNOTS)										99.0 +250		
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0			
SFC	571	-8.1	-6.1	-3.9	-1.7	0.0	2.0	6.1	10.2	12.7	13.9	16.1	18.3	20.3
950	1050	-13.9	-10.4	-7.4	-4.0	-1.4	1.7	6.0	14.3	17.4	20.0	23.4	26.6	29.9
900	3337	-15.7	-12.6	-9.3	-5.9	-3.3	-0.2	6.0	12.2	15.3	17.9	21.3	24.6	27.7
850	4898	-16.1	-12.9	-9.4	-5.9	-3.2	0.0	6.5	13.0	16.2	16.9	22.4	25.9	29.1
800	6539	-17.5	-13.9	-10.0	-6.1	-3.1	5.5	7.7	14.9	16.5	21.5	25.4	29.3	32.4
750	8226	-17.4	-13.5	-9.3	-5.1	-1.6	2.1	9.9	17.7	21.6	24.9	29.1	33.1	37.2
700	10102	-19.4	-14.9	-10.0	-5.2	-1.4	3.1	12.1	21.1	25.6	29.4	34.2	39.1	43.6
650	12034	-20.4	-15.4	-10.9	-4.4	-0.1	4.9	15.7	25.5	30.5	34.8	40.3	45.8	50.8
600	14111	-22.5	-16.8	-10.5	-4.3	-0.6	6.3	16.0	25.7	35.4	40.3	46.5	52.6	58.5
550	16312	-25.6	-18.5	-11.4	-4.2	-1.3	7.8	21.1	34.4	40.9	46.4	53.6	60.7	67.2
500	18701	-27.5	-20.1	-12.1	-4.0	-2.2	9.6	24.5	39.4	46.6	53.0	61.1	69.1	76.5
450	21263	-30.1	-21.9	-13.9	-4.1	-2.8	11.6	27.5	44.0	52.2	59.1	68.0	76.9	85.1
400	24045	-32.1	-23.2	-13.5	-3.8	-3.8	12.7	10.6	48.9	57.8	65.4	75.1	84.8	93.7
350	27178	-34.6	-24.8	-14.1	-3.5	-4.8	14.6	34.4	54.2	60.0	72.3	82.9	93.6	103.4
300	30676	-35.0	-24.5	-13.1	-2.5	-1.6	7.3	19.1	60.4	70.9	79.8	91.3	102.7	113.2
250	34577	-30.3	-20.8	-8.8	2.5	1.1	21.5	42.4	63.3	73.6	82.3	93.6	104.6	115.1
200	39216	-20.3	-10.9	-0.6	9.7	17.7	27.1	46.3	65.5	74.9	82.9	93.2	103.5	112.9
175	41982	-13.2	-4.2	13.3	20.4	22.2	28.7	45.7	62.7	71.0	78.1	87.2	96.3	104.6
150	45154	-6.1	-4.9	8.0	16.2	22.2	29.2	43.5	57.8	64.8	70.8	78.4	86.1	93.1
125	48841	-3.3	2.4	9.1	15.6	20.6	26.5	38.4	50.7	56.6	61.6	68.1	74.6	80.5
100	53432	-0.0	6.1	11.3	15.4	20.2	30.0	39.8	44.6	48.7	53.9	59.2	64.0	69.0
80	57949	-8.9	-4.1	4.8	8.3	12.4	20.7	29.0	33.1	36.6	41.0	45.5	49.6	54.0
70	60653	-11.5	-7.4	-3.8	3.3	3.4	7.1	14.6	22.1	25.8	28.9	33.9	37.0	40.7
60	63796	-10.4	-11.6	-7.3	-3.6	-0.7	2.7	9.6	16.5	19.9	22.6	26.5	30.2	33.6
50	67536	-10.6	-15.3	-11.7	-7.1	-5.3	-2.0	4.7	11.4	14.7	17.5	21.1	24.7	28.0
40	72162	-22.0	-18.7	-15.1	-11.5	-9.7	-5.4	1.3	8.0	11.3	14.1	17.7	21.3	24.6
30	78265	-22.9	-19.5	-15.8	-12.0	-9.1	-5.7	1.3	8.3	11.7	14.6	18.4	22.1	25.5
25	82049	-26.0	-22.0	-17.6	-13.3	-9.9	-5.9	2.2	9.3	14.3	17.7	22.0	26.4	30.4
20	86860	-26.4	-21.9	-17.1	-12.4	-8.7	-4.3	4.5	13.3	17.7	21.4	26.1	30.9	35.3
15	93110	-20.8	-16.3	-11.4	-6.6	-2.8	1.7	10.7	19.7	24.2	28.0	32.8	37.7	42.2
10	102106	-14.5	-9.7	-4.8	-4.9	9.7	19.5	34.4	38.2	43.4	48.7	53.5		

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 28. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: April
NO. OBSERVATIONS -- SURFACE = 679, TOP = 394

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (INOTS)										97.1% .25D	99.0% .25D
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	20.0 -150	25.0 -150	30.0 -150	35.0 -150	40.0 -150		
SFC	571	-20.3	-16.1	-15.7	-13.3	-11.5	-9.3	-6.9	-0.5	1.7	3.5	5.9	8.3
950	1850	-29.7	-25.9	-22.3	-18.7	-15.9	-12.6	-5.9	-0.8	4.1	6.9	10.5	14.1
900	3317	-23.8	-21.0	-18.6	-15.6	-12.6	-9.6	-4.2	1.4	4.2	6.6	9.6	15.4
850	4838	-25.2	-22.2	-18.9	-15.6	-13.1	-10.1	-4.6	2.1	5.1	7.6	10.9	14.2
800	6519	-33.2	-24.6	-21.1	-17.3	-14.4	-11.0	-4.0	3.0	6.4	9.3	13.1	17.2
750	8244	-31.7	-27.6	-23.5	-19.2	-15.9	-12.0	-4.0	4.0	7.0	11.2	15.5	19.8
700	10112	-35.3	-30.8	-25.9	-21.1	-17.3	-12.8	-3.6	5.2	9.7	13.5	18.3	23.7
650	12036	-39.2	-34.2	-28.8	-23.4	-19.2	-14.3	-4.2	5.9	10.6	15.0	20.4	27.7
600	14111	-43.7	-38.0	-32.0	-25.9	-21.2	-15.6	-4.1	7.0	12.6	17.3	23.4	30.8
550	16312	-47.2	-41.1	-36.4	-27.7	-22.5	-16.4	-3.9	6.6	14.7	19.9	26.6	35.1
500	18711	-51.6	-44.6	-37.9	-30.0	-24.3	-17.5	-3.8	9.9	16.7	22.4	29.8	39.4
450	21263	-55.9	-48.5	-40.5	-32.4	-26.2	-19.8	-3.9	11.0	16.4	24.6	32.7	44.0
400	24045	-60.6	-52.5	-43.7	-34.9	-28.1	-20.0	-3.7	12.6	20.7	27.5	36.3	48.1
350	27174	-64.4	-55.9	-46.4	-36.8	-29.4	-20.7	-2.9	14.9	22.6	31.0	40.6	53.7
300	30316	-70.4	-60.9	-50.1	-39.8	-31.6	-21.9	-2.3	17.3	27.0	35.2	45.0	58.8
250	34577	-74.3	-63.9	-52.6	-41.3	-32.5	-22.1	-1.1	19.9	30.3	39.1	50.4	66.0
200	39216	-67.6	-57.9	-47.9	-36.8	-28.6	-18.9	-0.7	20.3	30.0	38.2	48.8	59.3
175	41982	-57.3	-48.8	-39.5	-30.2	-23.0	-14.5	2.6	20.1	28.6	35.8	45.1	62.9
150	45154	-68.3	-41.0	-13.0	-25.0	-11.6	-11.6	-3.4	18.3	25.6	39.8	47.8	55.1
125	48891	-40.2	-34.0	-27.0	-20.4	-15.1	-8.9	-3.6	16.5	22.7	28.0	34.8	47.8
100	53412	-30.7	-23.8	-20.5	-15.2	-11.1	-6.2	-3.6	13.4	18.3	22.4	27.7	37.9
80	57949	-23.0	-19.3	-15.3	-11.2	-6.1	-4.4	-3.1	10.6	14.3	17.4	21.5	29.2
70	60653	-18.4	-15.3	-11.9	-8.5	-5.9	-2.6	-3.4	9.6	12.9	15.5	18.9	25.4
60	63796	-15.7	-13.2	-10.5	-7.8	-5.7	-3.2	-1.8	9.3	11.4	14.1	16.8	19.3
50	67510	-13.9	-11.6	-9.5	-7.2	-5.0	-3.1	-1.0	5.3	7.4	9.2	11.5	15.9
40	72162	-13.2	-11.3	-9.2	-7.1	-5.5	-3.6	-1.2	4.2	6.1	7.7	9.8	13.8
30	78205	-12.5	-10.7	-8.7	-6.7	-5.2	-3.4	-0.9	4.8	5.8	7.3	9.3	13.1
25	82040	-14.1	-12.0	-9.7	-7.5	-5.7	-3.6	-0.6	4.8	6.7	10.6	12.2	15.6
20	86819	-14.7	-12.6	-10.3	-7.9	-6.1	-4.0	-1.4	5.5	6.7	11.1	13.4	17.5
15	93110	-15.5	-13.7	-10.6	-8.1	-6.1	-3.6	1.0	5.5	10.1	12.0	15.2	18.1
10	102166	-17.6	-16.7	-11.7	-8.8	-6.5	-3.8	1.7	7.2	12.2	15.1	18.1	

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 29. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: May
NO. OBSERVATIONS -- SURFACE = 70A. TOP = 605

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT.)	SCALAR WIND SPEED (KNOTS)									
		1.0 +250	2.0A +250	5.0 +150	10.0 +150	15.0A +150	25.0 +150	50.0 MEAN	75.0 +150	90.0 +150	97.5A +250
SFC	-1	0	0	0	1.3	3.5	6.0	11.2	16.4	18.9	21.1
950	1841	0	0	0	1.5	3.2	6.4	12.8	19.2	22.4	23.8
900	3333	0	0	0	1.8	3.8	6.1	10.8	15.5	17.6	20.9
850	4908	0	0	0	1.8	3.3	5.2	7.5	12.1	16.7	21.5
800	6568	0	0	1.2	3.9	6.1	6.6	13.8	19.0	21.5	23.4
750	8317	0	0	1.1	4.3	6.5	9.7	15.7	21.7	24.6	26.4
700	10174	0	0	1.8	4.4	7.3	10.7	17.5	24.3	27.1	30.3
650	12136	0	0	0	4.2	7.6	11.6	19.7	27.7	30.6	34.2
600	14232	0	0	0	5.0	8.7	13.1	21.9	30.7	31.8	39.5
550	16460	0	0	0	5.5	9.6	14.5	24.4	34.3	39.2	43.3
500	18875	0	0	0	6.2	10.4	16.2	27.1	38.0	42.4	48.0
450	21470	0	0	0	6.6	12.2	19.2	30.4	42.6	48.6	53.7
400	24318	0	0	0	2.7	9.5	14.8	21.0	33.7	46.4	52.6
350	27444	0	0	0	4.9	12.0	17.6	24.2	37.5	50.8	57.4
300	30935	0	0	0	5.8	12.9	20.1	27.5	52.4	57.3	63.9
250	34918	0	0	0	7.3	16.1	22.9	31.0	47.3	63.3	71.7
200	39606	0	0	0	10.0	18.9	25.9	34.1	50.6	67.5	75.7
175	42356	0	0	0	12.0	20.1	26.1	33.7	48.6	63.5	70.9
150	45515	3.1	8.9	4.0	15.2	21.5	26.4	32.2	43.9	55.6	61.4
125	49245	4.8	9.5	14.6	19.7	23.7	28.4	37.9	47.4	52.1	56.1
100	53783	0	0	0	17.7	12.2	15.7	19.8	36.6	40.7	44.2
80	58304	0	0	0	1.7	5.0	7.5	10.5	16.5	22.5	25.5
70	61014	0	0	0	2.3	4.3	6.6	11.4	16.2	20.5	23.0
60	64160	0	0	0	0.7	2.2	4.0	4.1	11.2	14.5	16.5
50	67917	0	0	0	0.9	2.4	4.1	7.6	11.1	12.6	14.3
40	72566	0	0	0	1.7	3.2	5.0	6.7	12.4	14.2	15.7
30	78652	0	0	0	1.7	3.5	5.6	9.8	14.0	16.1	17.9
25	82552	0	0	0	1.6	3.6	5.9	10.6	15.3	17.6	22.1
20	87369	0	0	0	1.5	3.6	6.0	11.0	16.0	18.4	20.5
15	93665	0	0	0	2.7	4.9	7.4	17.8	20.3	22.5	25.8
10	102687	0	0	0	3.2	5.8	8.9	15.1	21.3	24.4	27.0

Table 30 Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: May
NO. OBSERVATIONS -- SURFACE = 7000; TOP = 405

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)					90.0 +150	95.0 +150	97.5 +250	99.0 +250			
		1.0 -250	2.25 -250	5.0 -150	10.0 -150	15.0 -150							
SFC	571	-7.1	-5.1	-2.9	-0.7	1.0	3.0	7.1	11.2	14.9	17.1	19.3	21.3
950	1041	-11.5	-8.6	-5.8	-2.8	-0.5	2.2	7.6	13.4	16.1	18.4	21.4	27.1
700	3313	-11.4	-9.0	-6.3	-3.7	-1.6	0.8	5.6	10.8	15.3	17.9	20.6	23.0
650	4508	-13.1	-10.4	-7.5	-4.6	-2.3	0.6	5.6	11.2	13.9	16.2	19.1	22.0
600	6568	-16.5	-13.3	-9.8	-6.2	-3.5	-0.3	6.3	12.9	16.1	18.0	22.4	29.1
550	1014	-16.1	-14.4	-10.4	-6.9	-3.3	-0.6	7.4	15.2	18.9	22.0	26.0	30.0
500	12136	-20.1	-15.6	-10.8	-6.7	-3.9	1.2	9.5	17.6	21.9	25.4	29.8	38.4
450	14232	-21.1	-16.1	-10.7	-5.7	-1.9	2.6	11.6	21.0	26.5	30.3	36.1	43.7
400	16460	-21.0	-15.7	-10.0	-5.2	-1.0	4.0	14.1	24.2	29.2	33.9	38.9	44.3
350	18875	-21.0	-15.9	-10.6	-5.0	-1.5	5.6	16.7	27.6	32.9	37.4	43.3	49.4
300	21479	-22.7	-16.4	-10.5	-5.5	-2.7	7.2	18.0	30.6	37.4	43.3	49.1	54.4
250	24318	-21.4	-15.0	-10.7	-5.1	-0.5	11.1	25.0	38.3	44.9	50.5	57.6	64.3
200	27444	-22.1	-15.0	-10.5	-5.5	-0.5	13.6	28.0	42.4	49.5	55.5	63.3	71.0
150	30635	-23.2	-15.3	-10.7	-5.7	1.9	6.6	16.5	32.5	48.5	56.4	63.1	70.5
100	34918	-21.5	-13.1	-7.9	-5.3	12.4	20.8	31.9	55.0	63.4	70.7	79.7	88.2
200	39606	-16.6	-12.6	-10.0	-7.6	-1.3	10.6	17.5	25.5	42.4	68.1	75.2	84.3
175	42356	-19.3	-12.9	-5.2	13.2	19.5	26.9	41.9	56.9	64.3	70.6	78.6	86.7
150	45515	-12.1	-3.4	9.8	16.1	21.1	26.9	46.8	50.7	67.5	74.2	80.0	87.4
125	49245	-14.5	5.5	10.6	15.7	19.6	24.7	32.1	43.1	47.8	51.7	56.8	61.9
100	53463	-14.0	-6.3	4.2	8.6	12.1	16.2	20.4	32.8	40.4	44.8	49.3	53.4
80	58104	-19.6	-10.4	-12.9	-6.0	-3.3	6.5	13.0	19.5	22.7	25.6	28.9	32.4
70	61014	-13.3	-10.5	-7.4	-7.4	-1.9	6.7	12.5	15.3	17.7	20.8	23.9	26.7
60	64160	-15.1	-12.6	-10.3	-7.8	-5.8	-3.5	-7.6	-10.3	-15.3	-16.2	-16.2	-17.5
50	67917	-19.9	-17.5	-14.9	-12.3	-10.3	-8.3	-10.3	-12.1	-14.1	-16.7	-16.7	-18.7
40	72566	-22.7	-20.3	-17.7	-15.0	-13.0	-11.0	-13.0	-15.7	-16.6	-18.6	-18.6	-20.6
30	76652	-25.7	-22.9	-19.8	-16.8	-14.4	-11.6	-14.4	-15.9	-16.2	-18.0	-18.0	-19.9
25	82552	-28.9	-25.6	-22.0	-18.6	-15.6	-12.3	-15.6	-17.1	-17.4	-19.4	-19.4	-21.4
20	84369	-30.4	-25.0	-21.9	-19.0	-16.0	-12.0	-16.0	-17.6	-18.9	-20.6	-20.6	-22.6
15	91665	-32.5	-28.1	-23.3	-18.5	-16.5	-12.5	-16.5	-17.6	-18.8	-20.5	-20.5	-22.5
10	10297	-35.4	-30.2	-24.5	-18.0	-16.3	-12.3	-16.3	-17.5	-18.6	-20.7	-20.7	-22.7

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 31. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: May

NO. OBSERVATIONS -- SURFACE = 708; TOP = 405

PRESSURE LEVEL (MBR)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)											
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	40.0 MEAN	75.0 -150	90.0 -150	95.0 -150	97.5 -250	99.0 -250
SFC	571	-23.3	-21.0	-16.4	-15.0	-13.9	-11.6	-6.6	-2.6	2.3	4.6	7.4	9.7
950	1841	-27.1	-24.3	-21.2	-18.1	-15.7	-12.9	-7.1	-1.3	1.5	3.0	7.0	10.1
900	2313	-21.5	-19.7	-16.7	-14.2	-12.3	-10.0	-5.4	-0.8	1.5	3.4	5.6	8.4
850	4908	-24.3	-21.6	-18.6	-15.7	-13.4	-10.7	-5.2	-0.3	3.0	5.3	8.2	11.2
800	6568	-27.0	-23.9	-20.4	-16.9	-14.1	-10.9	-4.3	-0.3	2.3	5.5	8.2	11.8
750	6317	-30.0	-26.7	-22.1	-18.6	-14.7	-10.9	-3.2	-0.5	6.3	11.5	15.7	18.5
700	10174	-32.0	-27.6	-23.3	-18.7	-15.2	-11.0	-2.6	-0.6	10.0	13.5	16.1	19.8
650	12136	-35.0	-30.3	-25.2	-20.1	-16.2	-11.5	-1.5	-0.1	7.3	12.0	15.9	22.6
600	14232	-36.3	-31.3	-25.9	-20.5	-16.3	-11.3	-1.3	-0.6	12.0	15.9	21.0	26.8
550	16460	-39.2	-33.6	-27.9	-21.9	-17.3	-11.9	-0.8	10.3	13.7	17.9	23.3	30.8
500	18875	-42.9	-36.6	-30.2	-23.6	-16.4	-12.3	-0.8	12.3	15.7	20.3	26.3	32.2
450	21470	-47.0	-40.3	-33.0	-25.6	-19.6	-13.2	-0.5	14.2	18.4	23.6	30.2	37.6
400	24118	-49.7	-42.5	-34.7	-26.9	-20.8	-13.6	-0.4	15.4	22.6	26.6	34.0	42.6
350	27444	-53.1	-45.3	-36.8	-28.7	-21.8	-14.6	-0.3	17.4	25.2	28.7	36.5	45.5
300	30935	-57.6	-49.1	-40.7	-30.7	-23.5	-15.5	-0.2	2.3	19.6	26.1	34.2	43.5
250	34918	-63.7	-53.7	-44.3	-32.3	-24.6	-15.3	-0.1	2.3	19.3	25.3	34.4	42.4
200	39606	-54.6	-46.0	-36.6	-27.1	-19.6	-11.2	-0.4	6.4	23.5	32.0	41.1	51.5
175	42346	-47.6	-39.6	-31.3	-22.8	-16.2	-8.4	-0.4	7.4	24.0	32.6	39.9	49.4
150	45515	-35.5	-29.7	-22.9	-16.2	-10.9	-4.7	-0.3	7.9	23.2	31.0	37.6	46.4
125	49245	-29.2	-24.0	-18.3	-14.2	-9.2	-4.2	-0.2	7.6	20.5	26.7	32.6	41.7
100	53743	-22.0	-17.9	-13.5	-9.0	-5.6	-1.5	-0.7	14.9	19.0	23.4	33.5	44.4
80	58304	-15.3	-12.5	-9.5	-6.5	-3.5	-1.1	-0.3	1.3	12.7	19.9	26.9	31.3
70	61014	-12.5	-10.7	-8.2	-5.7	-3.7	-1.0	-0.3	3.6	8.2	12.4	15.1	23.9
60	64140	-12.5	-10.6	-8.5	-6.4	-4.7	-2.8	-1.2	5.2	7.1	10.8	14.9	19.7
50	67917	-11.3	-9.7	-7.9	-5.2	-3.2	-1.6	-0.1	3.4	5.0	6.4	9.9	11.5
40	72546	-11.1	-9.6	-7.9	-5.3	-3.5	-1.5	-0.4	2.7	4.2	5.5	8.8	10.3
30	78642	-12.7	-11.0	-9.1	-7.2	-5.7	-3.0	-0.4	3.2	4.9	6.4	8.3	10.2
25	82552	-13.2	-11.4	-9.4	-7.4	-5.9	-3.1	-0.4	3.3	5.1	6.6	8.6	10.6
20	87349	-14.7	-12.6	-10.3	-8.1	-6.1	-3.6	-0.2	4.2	6.3	7.0	9.0	11.0
15	93645	-17.1	-14.8	-12.0	-9.3	-7.1	-4.3	-0.1	4.2	6.3	8.1	10.6	12.6
10	102681	-17.1	-14.8	-12.0	-9.3	-7.1	-4.3	-0.1	5.8	8.3	10.5	12.0	14.7

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 32. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: June

NO. OBSERVATIONS == SURFACE == 751, TOP == 416

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT.)	SCALAR WIND SPEED (INCHES)						.050 .950 .150	.950 .97-.73 .250
		1.0 -250	2.0A -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150		
SFC	571	0	0	.9	2.9	5.3	10.2	15.1	17.5
950	1601	0	0	1.0	3.3	6.0	11.4	17.0	19.7
900	3110	0	0	2.4	6.3	6.2	11.1	15.7	17.9
850	4915	0	0	1.9	5.3	7.5	12.0	16.7	20.6
800	6611	0	0	1.1	3.7	5.7	8.1	12.9	17.7
750	6319	0	0	1.9	2.8	6.0	8.6	13.9	19.2
700	10262	0	0	1.0	4.2	6.6	9.5	15.3	21.1
650	12241	0	0	1.1	4.5	7.2	10.4	16.6	23.2
600	14340	0	0	1.8	6.7	7.7	11.3	16.5	25.7
550	16447	0	0	4.8	6.2	12.2	20.4	28.6	32.6
500	18910	0	0	5.2	9.0	13.5	22.6	31.7	40.0
450	21112	0	0	5.4	9.4	14.9	25.4	35.9	41.0
400	24616	0	0	5.0	10.0	15.9	26.0	40.1	46.0
350	27199	0	0	5.7	11.4	18.2	31.9	45.6	52.4
300	31345	0	0	7.5	13.7	21.1	36.1	50.9	64.5
250	35350	0	0	12.9	19.2	26.6	41.6	56.6	70.3
200	40144	0	0	14.8	21.4	29.2	44.9	60.4	75.0
175	42917	0	0	15.6	21.6	29.1	43.9	58.7	72.0
150	46643	0	0	3.0	15.7	20.7	26.5	38.4	56.1
125	49174	0	0	1.2	11.6	15.7	20.5	30.2	44.7
100	53206	0	0	1.6	9.1	7.3	11.0	16.6	26.2
75	58115	0	0	1.5	1.5	3.5	5.5	10.5	15.2
70	61348	0	0	1.0	1.0	3.3	5.3	9.3	13.3
65	64517	0	0	2.1	4.0	6.2	10.7	15.7	17.4
50	68104	0	0	4.0	6.0	8.1	12.2	18.9	21.4
40	72946	0	0	1.3	6.0	8.9	11.4	16.5	21.6
30	79946	0	0	2.0	7.7	9.9	12.5	17.6	23.1
25	83112	0	0	3.5	9.2	11.4	14.0	19.3	24.6
20	87056	0	0	3.4	9.6	11.7	14.4	19.0	25.6
15	91166	0	0	3.4	9.4	12.3	15.2	21.2	27.2
10	103261	0	0	1.7	4.0	4.5	11.8	14.5	20.1

Table 33. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: June
NO. OBSERVATIONS -- SURFACE = 751, TOP = 416

SFC	571	-8.0	-6.0	-3.8	-1.5	.2	2.2	6.0	10.6	12.6	14.3	16.6	18.8	20.8	22.3	24.8	26.3	27.1	28.1	29.9	31.4	32.6	34.4	35.0	35.5	36.5	37.3	38.5	39.1	39.2	39.5	39.8	40.1	40.4	40.7	41.3	41.7	42.7	43.1	43.7	44.7	45.7	46.7	47.7	48.7	49.7	50.7	51.7	52.7	53.7	54.7	55.7	56.7	57.7	58.7	59.7	59.9	59.3	58.5	57.5	56.5	55.5	54.5	53.5	52.5	51.5	50.5	49.5	48.5	47.5	46.5	45.5	44.5	43.5	42.5	41.5	40.5	39.5	38.5	37.5	36.5	35.5	34.5	33.5	32.5	31.5	30.5	29.5	28.5	27.5	26.5	25.5	24.5	23.5	22.5	21.5	20.5	19.5	18.5	17.5	16.5	15.5	14.5	13.5	12.5	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5	-0.5	-1.5	-2.5	-3.5	-4.5	-5.5	-6.5	-7.5	-8.5	-9.5	-10.5	-11.5	-12.5	-13.5	-14.5	-15.5	-16.5	-17.5	-18.5	-19.5	-20.5	-21.5	-22.5	-23.5	-24.5	-25.5	-26.5	-27.5	-28.5	-29.5	-30.5	-31.5	-32.5	-33.5	-34.5	-35.5	-36.5	-37.5	-38.5	-39.5	-40.5	-41.5	-42.5	-43.5	-44.5	-45.5	-46.5	-47.5	-48.5	-49.5	-50.5	-51.5	-52.5	-53.5	-54.5	-55.5	-56.5	-57.5	-58.5	-59.5	-60.5	-61.5	-62.5	-63.5	-64.5	-65.5	-66.5	-67.5	-68.5	-69.5	-70.5	-71.5	-72.5	-73.5	-74.5	-75.5	-76.5	-77.5	-78.5	-79.5	-80.5	-81.5	-82.5	-83.5	-84.5	-85.5	-86.5	-87.5	-88.5	-89.5	-90.5	-91.5	-92.5	-93.5	-94.5	-95.5	-96.5	-97.5	-98.5	-99.5
571	571	-8.0	-6.0	-3.8	-1.5	.2	2.2	6.0	10.6	12.6	14.3	16.6	18.8	20.8	22.3	24.8	26.3	27.1	28.1	29.9	31.4	32.6	34.4	35.0	35.5	36.5	37.3	38.5	39.1	39.2	39.5	39.8	40.1	40.4	40.7	41.3	41.7	42.7	43.1	43.7	44.7	45.7	46.7	47.7	48.7	49.7	50.7	51.7	52.7	53.7	54.7	55.7	56.7	57.7	58.7	59.7	59.9	59.3	58.5	57.5	56.5	55.5	54.5	53.5	52.5	51.5	50.5	49.5	48.5	47.5	46.5	45.5	44.5	43.5	42.5	41.5	40.5	39.5	38.5	37.5	36.5	35.5	34.5	33.5	32.5	31.5	30.5	29.5	28.5	27.5	26.5	25.5	24.5	23.5	22.5	21.5	20.5	19.5	18.5	17.5	16.5	15.5	14.5	13.5	12.5	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5	-0.5	-1.5	-2.5	-3.5	-4.5	-5.5	-6.5	-7.5	-8.5	-9.5	-10.5	-11.5	-12.5	-13.5	-14.5	-15.5	-16.5	-17.5	-18.5	-19.5	-20.5	-21.5	-22.5	-23.5	-24.5	-25.5	-26.5	-27.5	-28.5	-29.5	-30.5	-31.5	-32.5	-33.5	-34.5	-35.5	-36.5	-37.5	-38.5	-39.5	-40.5	-41.5	-42.5	-43.5	-44.5	-45.5	-46.5	-47.5	-48.5	-49.5	-50.5	-51.5	-52.5	-53.5	-54.5	-55.5	-56.5	-57.5	-58.5	-59.5	-60.5	-61.5	-62.5	-63.5	-64.5	-65.5	-66.5	-67.5	-68.5	-69.5	-70.5	-71.5	-72.5	-73.5	-74.5	-75.5	-76.5	-77.5	-78.5	-79.5	-80.5	-81.5	-82.5	-83.5	-84.5	-85.5	-86.5	-87.5	-88.5	-89.5	-90.5	-91.5	-92.5	-93.5	-94.5	-95.5	-96.5	-97.5	-98.5	-99.5
571	571	-8.0	-6.0	-3.8	-1.5	.2	2.2	6.0	10.6	12.6	14.3	16.6	18.8	20.8	22.3	24.8	26.3	27.1	28.1	29.9	31.4	32.6	34.4	35.0	35.5	36.5	37.3	38.5	39.1	39.2	39.5	39.8	40.1	40.4	40.7	41.3	41.7	42.7	43.1	43.7	44.7	45.7	46.7	47.7	48.7	49.7	50.7	51.7	52.7	53.7	54.7	55.7	56.7	57.7	58.7	59.7	59.9	59.3	58.5	57.5	56.5	55.5	54.5	53.5	52.5	51.5	50.5	49.5	48.5	47.5	46.5	45.5	44.5	43.5	42.5	41.5	40.5	39.5	38.5	37.5	36.5	35.5	34.5	33.5	32.5	31.5	30.5	29.5	28.5	27.5	26.5	25.5	24.5	23.5	22.5	21.5	20.5	19.5	18.5	17.5	16.5	15.5	14.5	13.5	12.5	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5	-0.5	-1.5	-2.5	-3.5	-4.5	-5.5	-6.5	-7.5	-8.5	-9.5	-10.5	-11.5	-12.5	-13.5	-14.5	-15.5	-16.5	-17.5	-18.5	-19.5	-20.5	-21.5	-22.5	-23.5	-24.5	-25.5	-26.5	-27.5	-28.5	-29.5	-30.5	-31.5	-32.5	-33.5	-34.5	-35.5	-36.5	-37.5	-38.5	-39.5	-40.5	-41.5	-42.5	-43.5	-44.5	-45.5	-46.5	-47.5	-48.5	-49.5	-50.5	-51.5	-52.5	-53.5	-54.5	-55.5	-56.5	-57.5	-58.5	-59.5	-60.5	-61.5	-62.5	-63.5	-64.5	-65.5	-66.5	-67.5	-68.5	-69.5	-70.5	-71.5	-72.5	-73.5	-74.5	-75.5	-76.5	-77.5	-78.5	-79.5	-80.5	-81.5	-82.5	-83.5	-84.5	-85.5	-86.5	-87.5	-88.5	-89.5	-90.5	-91.5	-92.5	-93.5	-94.5	-95.5	-96.5	-97.5	-98.5	-99.5
571	571	-8.0	-6.0	-3.8	-1.5	.2	2.2	6.0	10.6	12.6	14.3</td																																																																																																																																																																																																														

Table 34. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: June
NO. OBSERVATIONS -- SURFACE = 751; TOP = 416

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	MERIDIONAL WIND SPEED (KNOTS)					MERIDIONAL WIND SPEED (KNOTS)					
		1.0 -25n	5.0 -25n	10.0 -15n	15.0 -15n	25.0 -15n	50.0 MEAN	75.0 -15n	86.3 -15n	90.0 -15n	95.0 -15n	97.5 -15n
SFC	571	-21.2	-19.0	-16.6	-14.2	-12.4	-10.2	-5.6	-1.4	-0.4	7.4	9.6
950	1601	-23.3	-20.9	-18.3	-15.6	-13.6	-11.2	-6.3	-1.4	3.0	5.7	8.3
900	3310	-22.6	-20.2	-17.6	-14.9	-12.9	-10.5	-5.6	-0.7	1.7	6.4	9.0
850	4915	-23.9	-21.3	-18.4	-15.5	-13.3	-10.7	-5.3	-1.1	2.7	4.9	10.7
800	6601	-22.3	-21.4	-18.2	-15.1	-12.6	-9.7	-5.4	-2.1	5.0	7.5	13.3
750	8379	-24.5	-21.3	-17.8	-14.4	-11.7	-8.5	-4.3	-1.2	10.2	13.6	17.1
700	10262	-24.9	-21.5	-17.8	-14.1	-11.2	-8.0	-4.9	-0.9	12.3	16.0	19.7
650	12251	-25.8	-22.2	-18.2	-14.3	-11.2	-7.6	-4.7	-0.7	10.9	13.9	17.8
600	14380	-28.0	-24.4	-20.0	-15.5	-12.1	-8.0	-4.2	-0.4	12.5	15.9	20.4
550	16647	-30.4	-26.0	-21.2	-16.4	-12.7	-8.3	-4.6	-0.6	13.9	22.4	27.2
500	18670	-33.6	-28.7	-23.4	-18.0	-13.9	-9.9	-5.9	-0.9	17.6	25.2	35.4
450	21712	-37.7	-32.2	-26.2	-20.7	-15.6	-10.1	-6.0	-1.0	12.1	22.1	39.7
400	24619	-41.4	-35.4	-30.4	-22.2	-17.1	-11.1	-7.1	-1.2	13.5	19.5	31.2
350	27799	-47.3	-40.4	-32.8	-25.3	-19.4	-12.5	-8.6	-3.1	15.7	22.6	37.8
300	31345	-51.3	-43.6	-35.2	-26.6	-20.3	-12.6	-8.0	-3.0	16.6	26.3	36.0
250	35390	-54.8	-46.3	-37.0	-27.8	-20.6	-12.1	-7.1	-2.1	12.3	22.3	32.8
200	40146	-52.4	-44.0	-34.8	-25.6	-18.4	-10.0	-5.6	-0.6	10.8	20.5	30.5
175	42917	-56.1	-38.4	-30.7	-21.7	-15.7	-7.5	-4.0	-0.7	12.1	22.1	34.2
150	46063	-56.2	-30.0	-23.2	-16.4	-11.1	-4.9	-2.4	-0.4	12.3	24.6	33.1
125	49747	-26.7	-22.6	-16.9	-11.8	-7.8	-3.1	-1.4	-0.4	15.9	22.6	34.8
100	54209	-17.9	-11.8	-9.0	-5.3	-2.2	-1.2	-0.4	-0.1	13.7	16.4	23.2
80	58615	-12.8	-10.6	-8.2	-5.7	-3.8	-1.6	-0.6	-0.1	7.6	11.7	19.8
70	61389	-11.0	-9.2	-7.2	-5.2	-3.7	-1.9	-1.6	-0.3	8.9	14.2	26.3
60	64537	-11.1	-9.4	-7.6	-5.7	-4.7	-2.9	-1.8	-0.8	5.5	7.3	14.6
50	66304	-10.6	-9.0	-7.2	-5.5	-4.1	-2.5	-1.8	-0.8	4.2	6.4	12.7
40	72976	-13.6	-11.7	-9.2	-7.2	-5.7	-3.9	-2.2	-1.2	5.7	7.1	12.2
30	79094	-11.9	-10.3	-8.5	-6.8	-5.4	-3.8	-2.8	-1.4	5.8	6.8	10.8
25	83012	-12.2	-10.5	-8.7	-7.8	-6.8	-5.4	-3.7	-0.3	3.1	4.8	7.5
20	87054	-13.1	-11.3	-9.3	-7.3	-6.7	-5.7	-3.9	-0.1	3.7	5.6	9.3
15	94146	-14.4	-12.4	-10.2	-8.1	-7.4	-6.4	-4.4	-0.1	3.0	5.6	9.4
10	1032A1	-15.9	-13.7	-11.3	-9.8	-8.8	-7.9	-6.7	-0.1	4.5	6.7	11.1

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 35. Cumulative Frequency Distribution of Upper Winds (Scales) at Standard Pressure Levels for San Nicolas Island: July

NO. OBSERVATIONS -- SURFACE = 794; TOP = 470

PRESSURE LEVEL (IMBS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)										
		1.0 -250	2.2A -250	5.0 -150	10.0 -150	15.87 -150	25.0 -150	50.0 MEAN	75.0 +150	90.0 +150	95.0 +250	97.73 +250
SFC	571	0	0	0	0	0	0	0	0	0	0	0
950	1837	0	0	0	0	0	0	0	0	0	0	0
900	3369	0	0	0	0	0	0	0	0	0	0	0
850	5000	0	0	0	0	0	0	0	0	0	0	0
800	6713	0	0	0	0	0	0	0	0	0	0	0
750	8514	0	0	0	0	0	0	0	0	0	0	0
700	10420	0	0	0	0	0	0	0	0	0	0	0
650	12431	0	0	0	0	0	0	0	0	0	0	0
600	14577	0	0	0	0	0	0	0	0	0	0	0
550	16854	0	0	0	0	0	0	0	0	0	0	0
500	19321	0	0	0	0	0	0	0	0	0	0	0
450	21982	0	0	0	0	0	0	0	0	0	0	0
400	24698	0	0	0	0	0	0	0	0	0	0	0
350	28114	0	0	0	0	0	0	0	0	0	0	0
300	31713	0	0	0	0	0	0	0	0	0	0	0
250	35817	0	0	0	0	0	0	0	0	0	0	0
200	40640	0	0	0	0	0	0	0	0	0	0	0
175	43428	0	0	0	0	0	0	0	0	0	0	0
150	46568	0	0	0	0	0	0	0	0	0	0	0
125	50197	0	0	0	0	0	0	0	0	0	0	0
100	54593	0	0	0	0	0	0	0	0	0	0	0
80	59032	0	0	0	0	0	0	0	0	0	0	0
70	64879	2.7	4.7	6.9	9.2	10.9	12.9	17.1	21.3	23.3	25.0	27.3
60	64879	5.6	7.6	9.8	12.1	13.8	15.8	20.0	24.2	26.2	27.9	30.2
50	68652	8.2	10.4	12.8	15.2	17.0	19.7	23.6	28.0	30.2	32.0	34.4
40	73333	12.7	14.9	17.3	19.7	21.5	23.7	28.1	32.0	34.7	36.8	41.3
30	79452	13.7	16.0	18.5	21.0	23.0	25.3	30.1	34.7	36.5	38.5	43.5
25	83373	14.9	17.3	19.9	22.5	24.5	26.9	31.7	36.7	37.0	41.5	46.3
20	88222	16.9	19.4	22.9	24.9	27.0	29.5	34.6	38.9	40.9	43.5	48.5
15	94554	16.6	19.9	22.1	24.9	27.0	29.5	34.6	38.2	40.3	47.1	52.4
10	103629	19.7	23.1	26.5	29.1	32.2	35.5	40.5	44.5	47.9	50.5	57.3

Table 36. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: July

NO. OBSERVATIONS == SURFACE == 794. TOP == 470

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	NO. OBSERVATIONS == SURFACE == 794.					TOP == 470					
		1.0 -2.0 -250	5.0 -10.0 -150	10.0 -15.0 -100	15.0 -20.0 -50	25.0 -30.0 -50	ZONAL WIND SPEED (KNOTS) MEAN 50-C 75.0 100 130	5.0 -10.0 -150	10.0 -15.0 -100	15.0 -20.0 -50	25.0 -30.0 -50	ZONAL WIND SPEED (KNOTS) MEAN 50-C 75.0 100 130
SFC	571	-7.0	-5.3	-3.4	-1.6	-0.1	5.1	8.6	10.3	11.0	13.6	15.5
950	1637	-9.0	-7.1	-5.0	-3.0	-1.4	5.5	6.3	8.1	10.0	13.6	15.7
900	3369	-10.2	-8.3	-6.2	-4.1	-2.5	6.0	3.3	7.2	9.1	12.8	17.6
850	5060	-11.4	-9.3	-7.0	-4.8	-3.0	6.5	0.9	7.5	9.0	13.6	16.8
800	6713	-12.6	-12.1	-9.4	-6.7	-4.6	7.0	2.9	7.9	10.4	12.5	15.9
750	8514	-15.9	-13.2	-10.3	-7.4	-5.1	7.4	2.4	8.4	11.1	13.4	16.3
700	10420	-11.5	-14.6	-11.5	-8.3	-5.9	3.0	2.4	3.0	8.6	11.5	20.2
650	12431	-19.2	-16.1	-12.8	-9.4	-6.6	3.7	2.5	6.7	11.8	14.4	21.1
600	14577	-19.9	-16.7	-13.2	-9.7	-7.0	3.8	2.7	9.2	12.4	15.1	22.1
550	16854	-20.3	-17.6	-13.4	-9.7	-6.9	3.6	3.2	10.6	13.3	16.1	23.4
500	19321	-22.5	-18.8	-14.8	-10.7	-7.6	3.9	3.6	11.1	14.8	17.9	26.7
450	21962	-2.3	-19.3	-15.0	-10.7	-7.3	4.7	3.3	12.7	16.7	20.1	28.7
400	24898	-22.5	-19.3	-14.7	-10.1	-6.5	4.7	3.3	14.9	19.1	22.7	32.7
350	28114	-24.0	-19.4	-14.4	-10.9	-5.4	5.4	0.6	6.6	18.0	22.6	31.9
300	31713	-22.9	-19.6	-14.2	-9.6	-4.3	5.8	1.2	21.6	26.7	31.0	36.6
250	35817	-25.6	-20.1	-14.1	-9.1	-3.5	2.0	1.2	24.2	29.7	34.3	42.2
200	40640	-25.5	-19.9	-13.8	-7.7	-2.7	1.1	1.1	25.5	31.1	35.9	46.3
175	43428	-22.4	-19.3	-13.3	-7.3	-2.7	2.8	1.9	25.5	30.5	35.1	47.1
150	46568	-21.1	-16.4	-11.3	-6.1	-2.1	2.6	1.2	21.8	26.5	30.5	40.8
125	50197	-21.4	-17.4	-13.0	-8.7	-5.3	1.0	0.8	14.9	18.9	22.3	35.0
100	54593	-21.9	-19.9	-16.1	-13.1	-10.7	-7.9	-2.3	3.3	6.1	8.5	17.3
80	59032	-26.9	-22.7	-20.3	-17.4	-15.6	-13.7	-1.1	-4.5	-2.3	0.4	6.7
70	61726	-25.0	-19.9	-13.8	-7.7	-19.9	-16.4	-12.6	-16.4	-16.9	-3.3	-7.6
60	64079	-21.4	-29.2	-26.8	-24.4	-22.4	-20.4	-16.0	-11.6	-9.4	7.7	-5.2
50	68652	-31.3	-32.2	-29.9	-27.5	-25.7	-23.6	-19.2	-14.8	-12.7	-16.5	-6.2
40	73313	-36.3	-36.1	-33.7	-31.3	-29.5	-27.3	-23.3	-16.3	-14.5	-12.1	-7.5
30	79452	-43.1	-40.9	-38.5	-36.1	-34.2	-32.0	-27.9	-23.0	-20.8	-18.9	-16.5
25	83373	-46.2	-43.8	-41.2	-38.6	-36.2	-34.2	-29.4	-24.6	-22.2	-20.2	-15.0
20	88222	-49.2	-45.8	-43.2	-40.5	-38.5	-36.1	-32.9	-26.3	-23.9	-21.9	-16.2
15	94554	-51.7	-49.2	-46.5	-43.7	-41.6	-39.1	-34.0	-28.9	-26.4	-24.3	-16.8
10	103629	-59.4	-56.4	-53.1	-49.7	-46.0	-41.1	-37.8	-31.6	-28.5	-22.5	-19.2

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 37. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicola Island: July

NO. OF OBSERVATIONS -- SURFACE = 794, TOP = 470

PRESSURE LEVEL (IMBS)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)				MERRIDIONAL WIND SPEED (KNOTS)			
		1.0		2.0		5.0		10.0	
		-250	-150	-250	-150	-250	-150	-250	-150
SFC	571	-16.9	-15.1	-13.2	-11.2	-9.7	-7.9	-4.3	-0.7
950	1837	-16.8	-14.9	-12.8	-10.7	-9.0	-7.1	-3.1	-0.9
900	3369	-15.8	-13.8	-11.6	-9.4	-7.7	-5.7	-1.6	-0.5
850	5000	-15.4	-13.3	-11.0	-8.7	-6.9	-4.8	-0.5	-0.5
800	6713	-14.7	-12.4	-9.9	-7.4	-5.4	-3.1	-1.6	-0.3
750	8514	-13.7	-11.2	-8.5	-5.8	-3.7	-1.2	-0.8	-0.6
700	10420	-12.3	-9.8	-7.1	-4.3	-2.2	-0.3	-0.4	-0.6
650	12431	-12.0	-9.4	-6.6	-3.7	-1.5	-0.1	-0.4	-0.5
600	14577	-12.3	-9.6	-6.6	-3.6	-1.3	-0.4	-0.4	-0.5
550	16854	-13.2	-10.3	-7.1	-3.9	-1.4	-0.5	-0.5	-0.5
500	19321	-14.2	-11.0	-7.5	-4.1	-1.4	-0.4	-0.2	-0.2
450	21982	-15.2	-11.8	-8.1	-4.3	-1.4	-0.4	-0.0	-0.0
400	24898	-17.4	-13.5	-9.3	-5.0	-1.7	-0.7	-0.2	-0.2
350	28114	-18.5	-14.1	-9.3	-4.5	-0.7	-0.7	-0.7	-0.7
300	31713	-18.1	-13.2	-7.9	-2.6	-1.5	-0.4	-0.4	-0.4
250	35817	-16.9	-11.6	-5.8	-0.1	-0.1	-0.4	-0.4	-0.4
200	40640	-18.9	-13.0	-6.5	-0.0	-0.0	-0.9	-0.9	-0.9
175	43428	-16.8	-11.2	-5.1	-0.0	-0.0	-0.9	-0.9	-0.9
150	46548	-14.1	-9.3	-4.1	-0.1	-0.1	-0.9	-0.9	-0.9
125	50197	-12.2	-8.4	-4.3	-0.2	-0.2	-0.8	-0.8	-0.8
100	54593	-12.3	-9.5	-6.4	-2.3	-0.9	-0.9	-0.9	-0.9
80	59032	-11.3	-9.1	-6.7	-4.3	-2.5	-0.3	-0.3	-0.3
70	61726	-9.6	-7.8	-5.8	-3.6	-2.3	-0.5	-0.5	-0.5
60	64879	-10.1	-8.4	-6.5	-4.7	-3.2	-1.5	-1.5	-1.5
50	68652	-9.8	-8.2	-6.5	-4.7	-3.4	-1.8	-1.4	-1.4
40	73333	-13.3	-11.4	-9.3	-7.3	-5.7	-3.8	-3.8	-3.8
30	79452	-12.5	-10.7	-8.8	-6.8	-5.3	-3.5	-3.5	-3.5
25	83373	-12.5	-10.7	-8.7	-6.7	-5.1	-3.3	-3.3	-3.3
20	88222	-13.2	-11.4	-9.4	-7.4	-5.8	-4.0	-4.0	-4.0
15	94554	-13.8	-11.8	-9.6	-7.3	-5.6	-3.6	-3.6	-3.6
10	103629	-17.0	-14.6	-11.9	-9.3	-7.2	-4.8	-4.8	-4.8

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 38. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: August
 NO. OBSERVATIONS == SURFACE = A32, TOP = 450

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	SCALAR WIND SPEED (KNOTS)										
		1.0	2.28	5.0	10.0	15.87	25.0	50.0	75.0	84.13	90.0	95.0
SFC	571	0	0	0	2.1	4.0	8.0	12.0	13.9	15.6	17.7	19.8
950	1837	0	0	0	1.1	2.6	4.4	8.1	11.8	13.6	15.1	19.1
900	3373	0	0	0	1.6	2.9	4.5	7.6	10.7	12.3	13.6	17.0
850	5010	0	0	0	1.6	3.0	4.6	8.0	11.4	13.0	14.4	16.0
800	6759	0	0	0.2	2.1	3.6	5.3	8.9	12.5	14.2	15.7	19.5
750	8507	0	0	0.6	2.7	4.4	6.3	10.3	14.3	16.2	17.9	20.0
700	10413	0	0	0.7	3.1	4.9	7.0	11.4	15.8	17.9	19.7	22.1
650	12418	0	0	0.9	3.4	5.6	7.7	12.4	17.1	19.4	21.4	23.9
600	14564	0	0	0.4	3.2	5.4	8.0	13.2	18.4	21.0	23.2	26.0
550	16841	0	0	2.9	5.3	8.1	13.4	19.5	22.3	24.7	27.7	30.8
500	19311	0	0	3.0	5.6	8.6	14.4	21.0	24.0	26.6	29.9	33.2
450	21969	0	0	3.6	6.4	9.7	16.5	23.3	26.6	29.4	33.1	36.7
400	24888	0	0	4.5	7.6	11.3	18.7	26.1	29.8	32.9	36.9	40.9
350	28100	0	0	4.6	8.4	12.8	21.6	30.9	35.2	39.0	43.8	46.6
300	31606	0	0	1.6	6.8	10.4	15.5	25.1	34.7	39.4	43.4	48.0
250	35791	0	0	4.1	9.7	14.0	19.1	29.4	39.7	44.8	49.1	54.7
200	40600	0	0	1.3	7.0	12.7	22.3	32.9	43.5	48.7	53.1	58.8
175	43343	0	0	1.9	7.3	12.6	21.6	31.7	41.7	46.6	50.8	56.1
150	46522	0	0	1.0	5.8	10.6	14.4	27.8	36.4	41.2	45.0	49.8
125	50157	0	0	2.6	6.4	9.3	12.8	19.6	26.6	30.3	33.2	37.0
100	54547	0	0	1.1	3.5	5.3	7.5	11.9	16.3	18.5	20.3	22.7
80	59063	0	0	1.9	3.9	5.4	7.2	10.9	14.6	16.4	17.9	21.9
70	61706	0	0	1.1	2.3	4.5	6.2	8.2	12.3	16.4	20.1	22.3
60	64852	0	0	1.9	4.2	6.4	8.2	10.3	14.5	18.7	20.4	24.8
50	68636	-3.1	0	5.2	7.5	9.7	11.5	13.6	17.6	22.0	24.1	28.6
40	73214	5.6	0	7.9	10.4	12.9	14.9	17.2	21.9	26.6	30.9	35.9
30	79419	10.2	0	12.4	14.8	17.3	19.2	21.4	26.0	30.6	34.7	39.6
25	83333	12.1	0	14.4	16.9	19.4	21.3	23.6	28.2	32.4	37.2	41.6
20	88143	12.3	0	14.7	17.4	20.6	22.1	24.5	29.5	34.5	39.0	44.3
15	94472	11.8	0	14.7	17.8	21.0	23.4	26.3	32.1	37.9	40.6	46.4
10	103506	11.9	0	15.2	18.8	22.3	25.1	28.4	35.0	41.6	44.9	50.8

Table 39. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: August

PRESSURE LEVEL (INRS)	MEAN HEIGHT (FT)	NO. OBSERVATIONS -- SURFACE = A32, TOP = 450			ZONAL WIND SPEED (KNOTS)			NO. OBSERVATIONS -- SURFACE = A32, TOP = 450					
		1.0	2.20	5.0	10.0	15.0	25.0	50.0	75.0	84.13	90.0	95.0	97.73
SFC	571	-7.2	-5.5	-3.6	-1.8	-0.3	1.4	4.9	8.4	10.1	11.6	13.4	15.3
950	1837	-8.9	-7.0	-4.9	-2.9	-1.3	.6	4.4	8.2	10.1	11.7	13.7	15.8
900	3373	-9.7	-7.9	-5.9	-3.9	-2.3	-0.5	3.3	7.1	8.9	10.5	12.5	14.5
850	5906	-11.3	-9.2	-6.7	-4.7	-2.9	-0.8	3.4	7.6	9.7	11.5	13.7	16.3
800	6779	-13.5	-11.1	-8.5	-5.9	-3.9	-1.5	3.3	8.1	10.5	12.5	15.1	17.7
750	8507	-15.4	-12.4	-9.9	-7.0	-4.8	-2.2	3.2	8.6	11.2	13.4	16.3	19.2
700	10413	-17.7	-14.8	-11.6	-8.4	-5.9	-3.0	3.0	8.0	11.9	14.4	17.6	21.8
650	12416	-20.2	-16.9	-13.3	-9.8	-7.0	-3.0	2.9	9.5	12.8	15.6	19.1	22.7
600	14564	-22.8	-19.2	-15.2	-11.3	-8.2	-4.6	2.6	10.2	13.8	16.9	20.8	26.0
550	16841	-23.4	-19.6	-15.4	-11.2	-8.0	-4.2	3.6	11.4	15.2	18.4	22.6	28.4
500	19311	-24.4	-20.2	-15.7	-11.1	-7.6	-3.4	5.0	13.4	17.6	21.1	25.7	30.6
450	21969	-24.4	-20.0	-15.2	-10.4	-6.7	-2.3	6.6	15.5	19.9	23.6	28.4	34.4
400	24888	-24.5	-19.4	-14.7	-9.5	-5.5	-0.8	8.8	18.4	23.1	27.1	32.3	37.6
350	28100	-26.8	-21.4	-15.4	-9.6	-5.0	-4.4	11.4	22.4	28.4	32.4	37.4	42.1
300	31696	-26.1	-20.4	-14.1	-7.9	-3.0	-2.7	1.4	26.1	31.8	36.7	42.9	49.6
250	35791	-25.8	-19.7	-13.0	-6.3	-1.1	5.0	17.5	30.0	36.1	41.3	48.0	54.7
200	40600	-24.0	-17.8	-11.0	-4.2	-1.0	7.3	20.0	32.7	38.9	44.2	51.0	57.8
175	43303	-21.6	-15.8	-9.5	-3.2	1.7	7.5	19.2	30.9	36.7	41.6	47.9	54.2
150	46522	-18.9	-13.8	-8.2	-2.6	1.7	6.8	17.2	27.6	32.7	37.0	42.6	49.2
125	50157	-19.8	-15.4	-10.8	-6.1	-2.4	1.9	10.7	19.5	23.8	27.5	32.2	36.9
100	54557	-22.0	-18.8	-15.3	-11.7	-9.0	-5.6	6.6	10.6	13.3	16.9	20.4	23.6
80	59003	-25.4	-22.7	-19.7	-16.8	-14.5	-11.8	-6.3	-0.8	1.9	4.2	7.1	12.8
70	61706	-27.4	-25.0	-22.3	-19.7	-15.2	-10.2	-5.2	-2.8	-0.7	1.9	4.6	7.0
60	64862	-30.3	-27.9	-25.2	-22.6	-20.5	-18.1	-13.1	-6.1	-5.7	-3.6	-1.0	1.7
50	68638	-33.9	-31.5	-28.8	-26.2	-20.1	-21.7	-16.7	-11.7	-9.3	-7.2	-4.6	-1.9
40	73314	-40.9	-38.1	-35.0	-31.9	-29.5	-26.7	-20.9	-15.1	-12.3	-9.9	-3.7	-0.5
30	79419	-44.7	-41.9	-38.9	-35.9	-33.5	-30.7	-25.1	-19.5	-16.7	-11.3	-8.3	-5.5
25	83313	-46.4	-43.7	-40.7	-37.8	-35.5	-32.8	-27.3	-21.8	-19.1	-16.8	-13.9	-8.2
20	88163	-48.6	-45.4	-42.7	-39.6	-37.2	-34.4	-28.6	-22.8	-20.0	-17.6	-14.5	-8.6
15	94472	-53.5	-50.3	-46.8	-43.4	-40.7	-37.5	-31.1	-24.7	-21.5	-18.8	-15.4	-8.1
10	103504	-59.4	-55.6	-51.8	-47.9	-44.8	-41.2	-33.6	-26.4	-22.8	-19.7	-15.8	-8.2

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 40. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: August

NO. OBSERVATIONS == SURFACE == 832. TOP == 450

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)					MERIDIONAL WIND SPEED (KNOTS)					
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 -150	75.0 -150	90.0 -150	95.0 -150	97.5 -150
SFC	571	-16.9	-15.1	+13.1	-11.1	-9.6	-7.8	-6.1	-0.4	1.4	2.9	4.9
950	1637	-16.7	-14.8	-12.7	-10.7	-9.1	-7.2	-3.4	-4	2.3	3.9	5.9
900	3373	-15.4	-13.5	-11.4	-9.3	-7.7	-5.8	-1.6	2.0	3.9	5.5	7.6
850	5000	-15.0	-13.0	-10.8	-8.5	-6.8	-4.8	-0.6	3.6	5.6	7.3	9.6
800	6799	-14.0	-11.9	-9.4	-7.0	-5.2	-3.0	-1.4	5.8	8.0	9.8	12.2
750	8507	-13.9	-11.5	-8.8	-6.2	-4.1	-1.7	3.3	6.3	10.7	12.6	15.4
700	10413	-13.8	-11.2	-8.4	-5.5	-3.3	-0.7	4.4	9.9	12.5	14.7	17.6
650	12118	-13.6	-10.9	-7.9	-5.0	-2.7	-0.5	5.5	11.0	13.7	16.0	18.9
600	14564	-13.4	-11.0	-7.9	-4.9	-2.5	-0.3	6.0	11.7	14.5	16.9	19.9
550	16841	-15.6	-12.5	-9.2	-5.9	-3.4	-0.4	5.7	11.6	14.8	17.3	20.6
500	19311	-13.1	-9.7	-6.3	-3.7	-0.6	-0.6	5.7	12.0	15.1	17.7	21.1
450	21969	-18.0	-14.5	-10.7	-6.9	-4.0	-0.5	6.5	13.5	17.5	19.9	23.7
400	24898	-19.9	-16.6	-11.8	-7.6	-4.3	-0.4	7.4	15.2	19.1	22.6	26.6
350	28100	-21.3	-17.0	-12.3	-7.6	-3.9	-0.4	9.2	18.0	22.3	26.9	30.8
300	31696	-22.2	-17.5	-12.4	-7.2	-3.2	-1.5	11.1	20.7	25.4	29.4	35.4
250	35191	-23.7	-18.4	-12.6	-6.8	-2.3	-3.0	13.6	24.6	29.9	34.6	39.7
200	40600	-24.1	-18.4	-12.1	-5.9	-1.0	-4.7	16.4	28.1	33.8	38.7	44.9
175	43393	-21.4	-16.0	-10.1	-4.2	-0.4	5.8	16.8	27.8	33.2	37.8	43.7
150	46522	-18.5	-13.8	-8.7	-3.6	-0.4	5.1	16.4	24.1	28.6	32.6	37.9
125	50157	-14.8	-11.3	-7.4	-3.6	-0.6	2.9	10.1	17.3	20.8	23.6	31.5
100	55557	-13.0	-10.4	-7.6	-4.6	-2.6	-0.6	5.2	10.4	13.0	15.2	18.0
80	59003	-10.3	-8.4	-6.3	-4.3	-2.7	-0.8	3.6	6.6	9.7	10.3	12.3
70	61706	-9.3	-7.7	-5.9	-4.2	-2.8	-1.2	2.1	5.4	7.0	8.4	11.9
60	64862	-10.5	-8.9	-7.1	-5.4	-3.6	-2.4	4.2	5.6	7.2	8.9	10.7
50	68638	-10.5	-9.0	-7.3	-5.7	-4.4	-2.9	4.2	5.3	6.1	7.7	9.4
40	73314	-10.6	-9.0	-7.4	-5.9	-4.5	-3.0	4.0	4.5	5.8	7.4	10.5
30	79419	-10.7	-9.2	-7.5	-5.9	-4.6	-3.1	4.6	5.9	7.5	9.2	10.7
25	83313	-12.1	-10.7	-8.6	-6.6	-4.5	-3.5	3.7	5.5	7.0	9.0	10.9
20	86163	-13.6	-11.6	-9.4	-7.3	-5.7	-3.9	4.9	5.9	7.5	9.6	11.7
15	94472	-15.0	-12.6	-10.4	-8.0	-6.2	-4.0	4.6	7.0	8.6	11.2	13.6
10	103504	-17.6	-12.2	-9.3	-7.1	-4.5	-3.1	4.1	6.1	8.7	10.9	13.8

NOTE == POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 41. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for San Nicolas Island: September

NO. OBSERVATIONS == SURFACE == 805, TOP == 449

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)										
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -500	50.0 MEAN	75.0 +1SD	90.0 +1SD	95.0 +2SD	
SFC	571	0	0	0	.7	2.4	4.4	8.4	12.4	14.4	18.2	20.4
950	1804	0	0	0	.5	2.3	4.1	8.8	13.2	15.3	19.5	22.4
900	3330	0	0	0	1.5	3.0	4.8	8.5	12.2	14.0	15.5	21.9
850	4941	0	0	0	1.6	2.7	4.4	6.3	10.3	14.3	17.5	21.3
800	6637	0	0	0	1.6	3.8	5.6	7.7	11.9	16.1	17.9	20.0
750	8412	0	0	0	2.4	4.9	6.8	9.0	13.6	18.2	20.0	22.1
700	10315	0	0	0	2.0	4.7	6.9	9.4	14.6	17.8	20.4	24.5
650	12310	0	0	0	1.7	4.8	7.2	10.0	15.8	21.6	22.3	27.2
600	14446	0	0	0	1.1	4.5	7.2	10.4	16.8	23.2	26.8	30.0
550	16716	0	0	0	1.4	5.0	7.9	11.3	18.1	24.9	28.3	32.5
500	19177	0	0	0	1.7	5.7	8.9	12.6	20.2	27.8	31.5	34.8
450	21824	0	0	0	1.7	6.2	9.8	14.0	22.5	31.0	35.2	38.7
400	24728	0	0	0	2.3	7.5	11.6	16.4	26.2	36.0	40.8	43.3
350	27920	0	0	0	4.1	9.8	14.3	19.6	30.3	41.0	46.3	50.1
300	31493	0	0	0	5.0	11.7	16.9	23.0	35.5	48.0	54.1	59.3
250	35566	0	0	0	6.8	14.3	20.2	27.1	41.2	55.3	62.2	72.7
200	40358	0	0	0	2.7	10.2	17.7	23.6	30.5	44.5	58.5	65.4
175	43140	0	0	0	4.2	11.3	18.3	23.8	30.3	43.4	56.5	63.0
150	46223	0	0	0	5.3	11.2	17.2	21.8	27.2	36.3	49.4	56.4
125	49911	0	0	0	3.2	8.9	13.4	18.6	29.3	40.0	45.2	49.7
100	54317	0	0	0	1.2	4.6	7.3	10.4	16.8	23.2	26.3	29.0
80	58766	0	0	0	1.0	1.4	3.3	5.5	10.1	14.7	16.5	18.8
70	61453	0	0	0	1.4	2.4	3.9	5.7	9.3	12.9	14.7	16.2
60	64593	0	0	0	1.1	2.2	3.9	5.6	9.8	13.8	15.7	17.4
50	68350	0	0	0	1.4	3.5	5.1	7.0	10.9	14.8	16.7	18.3
40	73002	0	0	0	1.5	4.0	6.0	8.3	13.0	17.7	20.0	22.0
30	79085	0	0	0	1.8	4.5	6.7	9.2	14.4	19.6	22.1	24.3
25	82992	0	0	0	2.7	5.4	7.6	10.1	15.3	20.5	23.0	25.2
20	87795	0	0	0	2.3	5.3	7.7	10.5	16.1	21.7	24.5	26.9
15	94048	0	0	0	1.6	4.7	7.2	10.1	16.0	21.9	24.8	27.3
10	103018	0	0	0	1.3	4.7	7.4	10.5	16.9	23.3	26.4	29.1

Table 42. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: September
NO. BASED AT ONE -- SURFACE = 805, TDP = 449

PRESSURE LEVEL (MB5)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)					MEAN	50.0 +150	60.0 +150	70.0 +150	80.0 +150	90.0 +150	95.0 +150	97.73 +250	99.0 +250
		1.0 -250	2.0 -250	5.0 -250	10.0 -150	15.0 -150									
SFC	571	-7.0	-5.3	-3.4	-1.5	-0.0	1.7	5.1	8.9	10.6	12.1	14.0	15.9	17.6	
950	1804	-12.1	-10.0	-7.4	-4.9	-2.9	-0.6	4.2	9.0	11.3	13.3	15.9	18.4	20.7	
900	3310	-15.7	-13.2	-10.5	-7.7	-5.7	-3.2	1.1	6.8	9.3	11.4	14.1	16.9	19.3	
850	4941	-18.3	-15.4	-12.3	-9.1	-6.7	-3.8	2.0	7.8	10.7	13.1	16.3	19.4	22.3	
800	6637	-20.2	-17.0	-13.5	-10.1	-7.4	-4.2	2.2	6.6	11.6	14.5	17.9	21.4	24.6	
750	8472	-22.1	-19.6	-14.8	-11.0	-8.0	-4.5	2.6	6.7	13.2	16.2	19.0	23.0	27.3	
700	10315	-23.2	-19.4	-15.3	-11.2	-8.0	-4.2	3.4	11.0	14.8	18.0	22.1	26.2	30.0	
650	12310	-23.4	-19.4	-15.4	-11.1	-7.7	-3.7	4.4	12.5	16.5	19.9	24.2	28.6	32.6	
600	14446	-24.2	-21.9	-15.3	-10.6	-7.0	-2.7	5.9	16.8	22.4	27.1	31.7	36.0		
550	15716	-24.3	-21.9	-14.9	-10.0	-6.2	-1.7	7.4	16.5	21.0	24.8	29.7	34.6	39.1	
500	19117	-24.7	-19.4	-14.5	-9.2	-5.1	-0.2	9.6	19.4	24.3	28.4	33.7	39.0	43.9	
450	21824	-25.5	-20.2	-14.4	-8.7	-4.7	1.1	11.6	22.5	32.3	33.0	43.8	49.1		
400	24128	-26.1	-22.0	-15.3	-8.7	-4.3	2.6	15.0	27.4	33.5	38.7	45.3	52.0	58.1	
350	27920	-28.2	-21.6	-14.4	-7.1	-4.5	5.1	18.6	32.1	38.7	44.3	51.6	58.6	65.4	
300	31493	-29.5	-21.9	-13.7	-5.4	1.0	8.6	23.9	39.2	46.8	53.2	61.5	69.7	77.3	
250	35544	-29.8	-21.4	-12.2	-3.0	4.1	12.5	29.6	46.7	55.1	62.2	71.4	80.6	89.0	
200	40358	-22.9	-14.4	-6.0	2.8	0.7	17.8	34.2	50.6	58.7	65.6	74.4	83.2	91.3	
175	43140	-17.9	-10.5	-2.4	5.7	12.0	19.4	36.5	49.6	57.3	63.3	71.4	79.9	86.7	
150	46233	-13.7	-7.4	-0.6	6.3	11.6	17.9	30.6	43.3	49.6	54.9	61.8	68.6	74.9	
125	49711	-12.4	-7.4	-1.9	3.5	7.8	12.8	23.0	33.2	38.2	42.5	47.9	52.4	58.4	
100	53317	-16.1	-12.2	-6.0	-3.8	-0.5	3.4	11.2	19.0	22.9	26.2	30.4	34.6	38.5	
80	58166	-20.4	-17.7	-14.3	-10.9	-6.2	-5.1	1.3	7.7	10.8	13.5	16.9	20.3	23.4	
70	61453	-22.2	-19.5	-16.5	-13.5	-11.2	-9.5	-2.9	2.7	5.4	7.7	10.7	13.7	16.4	
60	66543	-24.4	-21.7	-18.7	-15.8	-13.5	-10.8	-5.3	-2.9	5.2	7.7	11.1	13.8		
50	68350	-26.1	-23.4	-20.8	-18.1	-15.9	-13.4	-8.2	-3.0	-0.5	1.7	4.1	7.2	9.7	
40	73012	-30.4	-27.7	-24.7	-21.7	-19.4	-16.7	-11.1	-5.5	-2.8	-0.5	2.5	5.5	8.2	
30	75015	-33.0	-30.5	-27.3	-24.2	-21.7	-18.6	-12.9	-7.0	-4.1	-1.6	1.5	4.7	7.6	
25	82332	-34.4	-31.5	-28.3	-25.1	-22.6	-19.7	-13.7	-7.7	-4.8	-2.3	-0.9	1.1	7.0	
20	87795	-37.9	-34.1	-30.5	-26.9	-22.1	-20.6	-14.1	-7.4	-4.1	-1.3	2.3	5.9	9.2	
15	94068	-38.4	-34.9	-31.0	-27.2	-23.2	-20.7	-13.5	-7.6	-4.0	-1.3	2.3	5.9	9.2	
10	103014	-42.0	-37.9	-33.5	-29.0	-25.6	-21.5	-13.1	-7.0	-3.1	-1.0	2.4	6.9	11.3	

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 45. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: September

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	NO. OBSERVATIONS -- SURFACE = 805. TOP = 469										
		1.0	2.28	5.0	10.0	15.87	25.0	50.0	75.0	86.13	90.0	95.0
		-250	-150					+150				
SFC	571	-17.3	-15.5	-13.5	-11.5	-9.9	-8.1	-6.3	-4.3	-2.9	-4.9	-6.9
950	1804	-18.2	-16.1	-13.8	-11.4	-9.6	-7.5	-5.1	-3.1	-1.3	-5.2	-7.6
900	3330	-16.5	-14.4	-12.1	-9.7	-7.9	-5.8	-3.0	-1.4	-0.1	-3.4	-5.1
850	4941	-18.3	-15.7	-12.9	-10.1	-7.9	-5.3	-2.1	-0.1	-0.1	-2.7	-4.7
800	6637	-19.2	-16.3	-13.1	-9.9	-7.4	-4.5	-1.5	-0.5	-0.5	-1.5	-3.7
750	8422	-21.4	-18.0	-14.3	-10.6	-7.7	-4.3	-2.4	-0.5	-0.5	-1.5	-3.1
700	10315	-22.5	-18.9	-14.9	-11.0	-7.9	-4.3	-3.1	-1.0	-1.0	-1.5	-2.2
650	12310	-25.2	-21.2	-16.8	-12.4	-9.0	-5.0	-3.2	-1.4	-1.4	-1.5	-2.7
600	14446	-27.2	-22.9	-18.3	-13.6	-10.0	-5.7	-2.9	-1.5	-1.5	-1.5	-2.7
550	16116	-28.8	-24.3	-19.4	-14.5	-10.7	-6.2	-2.6	-1.0	-1.0	-1.5	-2.7
500	19177	-31.4	-26.9	-21.6	-16.2	-12.1	-7.2	-2.7	-1.2	-1.2	-1.5	-2.7
450	21224	-34.6	-29.5	-23.7	-17.8	-13.3	-8.0	-3.0	-1.5	-1.5	-1.8	-2.7
400	24728	-38.1	-32.2	-25.8	-19.3	-14.3	-8.4	-3.6	-1.5	-1.5	-1.8	-2.7
350	27920	-42.5	-35.9	-28.7	-21.4	-15.8	-9.2	-4.3	-1.8	-1.8	-2.1	-2.7
300	31493	-45.6	-38.3	-30.4	-22.5	-16.3	-9.0	-4.7	-2.0	-2.0	-2.4	-3.0
250	35564	-47.4	-39.4	-31.1	-22.6	-16.0	-9.2	-4.2	-2.0	-2.0	-2.4	-3.0
200	40358	-45.8	-38.0	-29.5	-20.9	-14.3	-6.5	-3.5	-1.5	-1.5	-1.8	-2.7
175	43140	-41.0	-32.1	-23.4	-16.1	-12.0	-4.4	-2.4	-1.0	-1.0	-1.3	-2.7
150	46263	-34.8	-28.6	-21.8	-15.1	-9.8	-3.6	-1.0	-0.5	-0.5	-0.8	-1.5
125	49911	-28.7	-23.7	-16.3	-12.9	-8.7	-3.8	-0.8	-0.3	-0.3	-0.5	-1.0
100	54337	-21.3	-17.7	-14.2	-10.6	-6.8	-2.7	-0.7	-0.2	-0.2	-0.3	-0.7
80	56766	-16.6	-14.4	-11.6	-8.6	-6.7	-4.2	-1.2	-0.2	-0.2	-0.3	-0.7
70	61453	-14.2	-12.2	-10.0	-7.8	-6.1	-4.1	-1.1	-0.1	-0.1	-0.2	-0.6
60	65543	-13.4	-11.5	-9.4	-7.3	-5.6	-3.7	-0.7	-0.3	-0.3	-0.4	-0.8
50	68350	-12.2	-10.5	-8.7	-6.9	-5.4	-3.7	-0.3	-0.1	-0.1	-0.2	-0.5
40	73002	-11.6	-10.0	-8.2	-6.5	-5.1	-3.5	-0.5	-0.2	-0.2	-0.3	-0.5
30	79045	-11.2	-9.6	-7.9	-6.2	-4.9	-3.3	-0.2	-0.1	-0.1	-0.2	-0.5
25	82992	-11.5	-9.8	-8.0	-6.1	-4.7	-3.0	-0.4	-0.1	-0.1	-0.2	-0.5
20	87795	-12.9	-11.1	-9.1	-7.1	-5.5	-3.7	-0.1	-0.1	-0.1	-0.2	-0.5
15	94068	-13.6	-11.4	-9.2	-7.1	-5.4	-3.4	-0.6	-0.1	-0.1	-0.2	-0.5
10	103116	-16.0	-13.7	-11.2	-8.7	-6.7	-4.4	-0.3	-0.1	-0.1	-0.2	-0.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 44. Cumulative Frequency Distribution of Upper Winds (Scalap) at Standard Pressure Levels for San Nicolas Island: October
NO. OBSERVATIONS = SURFACE = 806. TOP = 540

PRESSURE LEVEL (INPS)	MEAN HEIGHT (FT)	SCALAP WIND SPEED (KNOTS)											
		1.0	2.2A	5.0	10.0	15.0 ^a	25.0	40.0 ^b	75.0 ^c	84.13	90.0	95.0	97.73
SFC	5/1	0	0	1.5	3.4	7.2	11.0	12.9	14.5	16.5	16.6	20.5	
250	1457	0	0	2.3	4.4	9.8	14.6	17.3	19.4	22.1	24.8	27.3	
400	3376	0	1.6	3.3	5.2	9.2	13.2	15.1	16.8	18.9	21.0	22.9	
650	4974	0	2.6	4.5	6.5	10.4	14.7	16.7	18.6	20.6	22.8	24.8	
800	6656	0	1.1	3.5	5.1	7.5	11.9	16.3	20.3	22.7	25.1	27.7	
750	8427	0	1.4	4.0	6.1	9.4	13.5	18.5	20.9	23.0	25.6	28.3	
700	10295	0	1.8	4.6	6.0	9.4	14.5	19.8	22.4	24.6	27.4	30.2	
650	12274	0	1.8	5.0	7.5	10.4	16.4	22.4	25.3	27.8	31.0	34.2	
600	14390	0	1.6	5.9	8.2	11.5	18.2	24.9	29.2	31.0	34.6	37.5	
550	16640	0	1.3	5.5	6.7	12.5	20.2	27.9	31.7	34.1	36.6	41.5	
500	19078	0	1.2	5.6	9.5	13.8	22.4	31.0	35.3	38.5	43.6	47.0	
450	21699	0	1.3	5.7	9.9	14.8	24.9	39.9	44.1	49.5	52.9	59.9	
400	24570	0	1.6	6.5	11.1	16.5	27.5	38.5	43.9	49.5	56.4	65.3	
350	27710	0	1.9	7.5	12.7	18.8	31.2	43.6	49.7	54.9	61.5	74.3	
300	31247	0	1.7	8.1	13.9	20.7	34.5	48.3	55.1	60.9	69.3	75.7	
250	35262	0	1.7	8.9	15.2	22.7	37.5	52.9	60.4	66.7	74.9	83.0	
200	40076	0	2.1	10.1	16.4	23.8	38.8	53.8	61.2	67.5	75.5	83.6	
175	42792	0	3.5	10.9	16.7	23.5	37.7	51.1	57.9	63.7	71.1	78.5	
150	45914	0	4.2	15.0	21.6	34.0	46.2	52.2	57.3	63.8	70.4	76.3	
125	49596	0	2.9	6.5	12.9	19.1	28.6	39.1	46.3	48.7	56.3	60.9	
100	54016	0	4.4	4.9	8.4	12.5	20.9	29.3	33.4	36.9	41.4	45.9	
80	56425	0	0	1.9	4.5	7.5	13.7	19.9	22.9	25.5	28.8	32.1	
70	61096	0	0	2.6	3.8	6.0	10.4	14.8	17.0	21.2	23.6	25.8	
60	64199	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.0	22.4	
50	67970	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	21.0	23.6	
45	72523	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	19.1	22.6	
30	78547	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.6	22.6	
25	84155	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.7	23.0	
20	88174	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.9	23.6	
15	93767	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.9	23.6	
10	102215	0	0	2.6	3.8	6.0	10.4	13.6	15.4	17.6	20.9	23.6	

Table A6. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: October
 NO. OBSERVATIONS -- SURFACE = 906. TOP = 540

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	ZONAL SPEED (KNOTS)									
		1.0	2.25	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
SFC	571	-6.3	-6.6	-4.7	-2.9	-1.4	.3	3.0	7.3	9.0	10.5
950	1857	-16.7	-13.9	-10.8	-7.6	-4.4	-2.6	-1.1	8.8	11.6	14.0
900	3376	-17.6	-15.0	-12.1	-9.2	-6.7	-4.4	-1.0	6.4	9.0	11.2
850	4974	-19.6	-16.5	-13.7	-10.6	-7.9	-5.2	.7	6.6	9.5	12.0
800	6654	-22.1	-18.9	-16.4	-12.0	-9.3	-6.1	.3	6.7	9.9	12.6
750	8422	-23.6	-20.1	-16.3	-12.5	-9.6	-6.1	.9	7.9	11.4	14.3
700	102295	-24.3	-20.6	-16.0	-12.5	-9.6	-5.1	1.8	9.3	13.0	16.1
650	12274	-26.2	-22.1	-17.6	-13.1	-9.6	-5.5	2.9	11.3	15.4	18.9
600	14390	-28.0	-23.4	-18.4	-13.4	-9.5	-4.9	4.4	13.7	18.3	22.2
550	16640	-30.0	-24.9	-19.4	-13.8	-9.5	-4.4	5.9	16.2	21.3	25.6
500	19078	-31.9	-26.8	-20.1	-14.5	-9.2	-3.6	7.9	19.6	25.0	35.9
450	21699	-34.3	-29.1	-21.3	-14.5	-9.2	-3.0	9.7	22.6	33.9	40.7
400	24570	-36.5	-29.7	-22.2	-14.8	-9.0	-2.2	11.7	25.6	38.2	45.6
350	27710	-40.2	-32.5	-24.1	-15.7	-9.2	-1.5	14.1	29.7	37.4	43.9
300	31257	-42.2	-33.6	-24.6	-15.4	-9.3	.1	17.2	34.3	42.7	49.8
250	35242	-42.4	-33.4	-23.5	-13.7	-6.0	3.0	21.4	39.8	46.8	56.5
200	40026	-37.4	-28.5	-18.7	-9.0	-4.4	7.5	25.7	43.9	52.8	60.4
175	42792	-32.1	-23.7	-14.7	-5.6	-1.4	0.7	26.5	43.3	51.4	58.6
150	45938	-26.4	-19.1	-11.2	-3.3	2.9	10.2	24.9	39.6	53.1	61.0
125	49596	-20.9	-14.9	-6.3	-1.8	3.3	9.3	21.5	33.7	44.8	52.3
100	54016	-17.0	-12.4	-7.4	-2.4	1.5	6.1	15.4	24.7	33.2	43.2
80	58425	-11.1	-13.4	-9.5	-5.6	-2.6	1.0	6.2	15.4	22.0	29.9
70	61096	-16.1	-13.7	-10.1	-6.9	-4.5	-1.6	4.2	12.9	15.3	21.6
60	54199	-11.7	-14.9	-11.8	-6.7	-6.1	-3.5	2.3	10.9	13.3	16.4
50	67920	-17.6	-15.2	-12.3	-9.4	-7.2	-4.6	6.4	11.0	13.9	16.8
40	72523	-17.4	-14.9	-12.1	-9.4	-7.2	-4.7	5.2	10.4	13.1	16.4
30	78547	-18.9	-16.4	-12.8	-9.7	-7.2	-4.7	5.1	10.4	12.9	15.9
25	82415	-20.3	-16.9	-13.2	-9.6	-6.7	-3.3	3.5	10.3	13.7	16.6
20	87178	-21.2	-17.3	-13.1	-8.9	-5.6	-1.7	6.1	13.9	17.8	21.1
15	93376	-22.0	-16.5	-11.6	-6.6	-2.8	1.7	10.9	20.1	26.4	33.4
10	102215	-21.3	-15.9	-10.0	-6.0	-0.6	1.1	17.1	28.2	33.6	44.2

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 46 Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island. October

NO. OBSERVATIONS -- SURFACE = 806. TOP = 540

PRESSURE LEVEL (HRS)	MEAN WIND (KTS)	MERIDIONAL WIND SPEED (KNOTS)						90.0 0.13 +150	95.0 0.13 +250	97.5 0.13 +350	99.0 0.13 +500			
		25.0			50.0		75.0							
		MEAN	150	250	MEAN	150	250	MEAN	150	250	250			
SPC	5.71	-16.6	-14.4	-12.8	-10.8	-9.2	-7.4	-5.6	-4.1	-2.0	3.6	5.6	7.6	9.6
950	16.47	-16.1	-16.9	-16.2	-13.6	-11.5	-9.1	-6.1	-4.1	-2.4	3.3	5.6	7.6	10.7
900	33.76	-16.7	-13.7	-13.7	-11.2	-9.3	-7.0	-4.0	-2.4	-1.4	4.5	6.6	8.6	11.4
850	49.14	-21.2	-18.5	-15.5	-12.5	-10.2	-7.5	-5.0	-3.7	-2.4	6.4	8.7	11.7	14.7
800	66.14	-23.4	-20.4	-17.1	-13.7	-11.0	-7.8	-5.4	-3.7	-2.4	8.2	10.9	14.3	17.8
750	84.27	-27.5	-23.9	-19.8	-15.6	-12.7	-9.0	-6.0	-4.0	-2.4	9.5	12.6	16.6	20.6
700	102.95	-29.7	-25.7	-21.4	-17.1	-13.7	-9.7	-6.7	-4.7	-3.3	10.3	13.7	18.0	22.3
650	122.76	-33.5	-29.1	-24.3	-19.5	-15.7	-11.3	-8.3	-6.7	-4.7	11.1	14.9	19.7	24.5
600	143.90	-36.6	-31.7	-26.4	-21.2	-17.1	-12.3	-9.3	-7.3	-5.3	12.1	16.2	21.4	26.7
550	166.40	-40.5	-35.2	-29.8	-23.5	-19.0	-13.7	-10.7	-8.7	-6.7	13.4	17.9	23.8	34.5
500	190.71	-43.5	-37.4	-31.5	-25.3	-20.4	-14.7	-10.7	-8.7	-6.7	14.5	25.5	31.6	37.5
450	216.99	-49.0	-42.5	-35.4	-28.3	-22.4	-16.4	-12.4	-10.4	-8.4	16.4	22.1	29.2	42.3
400	245.70	-52.4	-45.4	-37.9	-30.3	-24.3	-17.3	-13.3	-11.3	-9.3	18.3	24.3	31.6	46.6
350	277.70	-58.5	-50.7	-42.2	-33.6	-27.0	-20.2	-16.2	-12.2	-10.2	20.4	27.0	35.6	44.4
300	312.57	-63.4	-55.0	-45.8	-36.6	-29.4	-21.6	-17.6	-13.6	-11.6	21.8	29.0	38.2	47.4
250	352.92	-66.2	-57.4	-47.8	-38.1	-30.6	-21.8	-16.2	-13.8	-11.8	23.0	30.5	49.8	58.6
200	400.26	-59.3	-51.1	-42.2	-33.2	-26.3	-18.1	-14.1	-11.1	-9.1	23.3	30.2	49.2	56.1
175	427.92	-52.5	-44.7	-35.4	-28.9	-22.7	-15.7	-12.7	-10.7	-8.7	15.1	21.3	27.5	35.4
150	459.19	-56.2	-49.7	-39.7	-32.6	-25.6	-20.1	-13.6	-10.6	-8.6	12.6	19.1	24.9	36.7
125	495.96	-58.3	-52.9	-42.9	-32.9	-21.9	-16.4	-11.4	-9.4	-7.4	11.2	16.6	21.2	33.1
100	540.16	-50.1	-40.1	-25.9	-21.3	-16.8	-13.2	-9.2	-6.2	-4.2	12.2	15.8	20.3	24.9
800	584.25	-52.4	-44.3	-32.4	-22.4	-16.0	-10.0	-6.0	-4.0	-2.0	5.5	8.5	11.2	17.9
70	610.51	-59.0	-49.2	-39.2	-31.2	-24.2	-17.2	-13.2	-10.2	-7.2	7.7	10.7	14.7	21.0
60	641.98	-57.8	-47.8	-35.5	-27.8	-20.5	-15.6	-12.6	-10.6	-8.6	5.2	7.1	9.6	12.1
50	679.20	-51.2	-45.0	-35.0	-25.6	-19.2	-14.2	-11.2	-9.2	-7.2	10.5	13.4	16.4	20.0
40	725.27	-54.6	-46.2	-32.7	-21.7	-16.2	-10.5	-7.5	-5.5	-3.5	6.3	9.4	12.4	16.5
30	749.57	-54.2	-46.2	-32.3	-21.2	-16.2	-10.5	-7.5	-5.5	-3.5	6.3	9.4	12.4	16.5
25	826.15	-53.1	-43.1	-29.3	-19.3	-13.2	-7.3	-4.3	-2.3	-0.3	3.9	7.3	10.3	13.3
20	871.78	-52.9	-41.1	-13.8	-9.1	-7.1	-4.1	-3.1	-1.1	-0.1	3.7	6.9	8.8	11.3
15	933.76	-56.1	-46.1	-13.8	-11.1	-7.1	-4.1	-2.1	-0.1	-0.1	3.9	5.5	8.8	11.3
10	1022.15	-51.2	-38.3	-16.1	-15.1	-11.9	-7.9	-5.9	-3.9	-1.9	5.5	8.4	10.1	17.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 47. Cumulative Frequency Distribution of Upper Winds (Scalars) at Standard Pressure Levels 1 & San Nicolas Island - November

NO. OBSERVATIONS -- SURFACE = 749. TOP = 415

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)									
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 -150	75.0 -150	100.0 -150	125.0 -150
SFC	571	0	0	0	.6	2.3	4.3	8.5	12.7	14.7	16.4
950	1960	0	0	0	0	3.0	6.0	12.2	16.4	21.4	24.0
900	3399	0	0	0	2.0	4.1	6.5	11.5	16.5	18.9	21.0
850	4970	0	0	0	.5	3.2	5.3	7.8	12.8	17.8	20.3
800	6624	0	0	0	1.1	4.0	6.2	9.8	14.2	19.6	22.4
750	8366	0	0	0	1.0	4.4	7.6	10.1	16.4	22.7	22.7
700	10210	0	0	0	1.1	4.6	7.7	11.3	18.7	26.1	26.1
650	12162	0	0	0	1.3	5.8	9.2	13.3	21.5	29.7	32.8
600	14249	0	0	0	1.1	6.2	10.2	14.9	24.4	33.9	38.6
550	16470	0	0	0	1.3	7.0	11.5	16.7	27.4	38.1	43.3
500	18878	0	0	0	2.0	8.3	13.1	18.8	30.4	42.0	47.7
450	21467	0	0	0	2.7	9.5	14.8	21.0	33.7	46.4	52.6
400	24308	0	0	0	3.4	10.8	16.6	23.4	37.2	51.0	57.9
350	27434	0	0	0	4.2	12.3	18.7	26.2	41.6	56.6	63.6
300	30925	0	0	0	5.5	15.3	22.2	30.3	46.8	63.3	71.4
250	34911	0	0	0	7.4	16.9	24.2	32.8	50.4	68.0	76.6
200	39610	0	0	0	.5	9.7	18.9	26.1	34.5	51.7	58.9
175	42356	0	0	0	2.0	10.6	19.1	25.4	33.7	49.6	55.5
150	45492	0	0	0	2.8	10.5	18.2	24.2	31.7	45.6	59.9
125	49157	0	0	0	1.4	8.0	14.5	19.6	25.6	37.8	56.0
100	53593	0	0	0	4.9	10.4	14.7	19.7	30.0	40.3	46.8
80	58028	0	0	0	2.0	6.3	9.6	13.5	21.5	29.5	33.4
70	60676	0	0	0	3.3	6.5	10.3	14.0	20.8	25.7	29.5
60	63770	0	0	0	2.5	5.1	8.2	14.5	20.8	23.9	26.5
50	67457	0	0	0	1.9	4.4	7.4	13.5	19.6	22.6	25.1
40	72011	0	0	0	1.7	4.1	6.9	12.7	18.5	21.3	23.7
30	77949	0	0	0	2.6	5.1	8.0	13.9	19.8	22.7	25.2
25	81745	0	0	0	3.7	6.5	9.8	16.6	23.4	26.7	29.5
20	86444	0	0	0	3.7	7.3	11.5	20.1	26.6	32.9	36.5
15	92566	0	0	0	5.6	10.2	15.6	26.6	37.6	43.0	47.6
10	101319	0	0	0	1.4	8.9	14.8	21.7	35.8	49.9	56.8

Table 48. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: November

NO. OBSERVATIONS - SURFACE = 769, TOP = 615

PRESSURE LEVEL (MB5)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)										69.0 0.5N
		1.0 -2.2H	5.0 -2.2H	10.0 -1.0H	15.0 -1.0H	20.0 -1.0H	25.0 -1.0H	30.0 -0.0H	35.0 -0.0H	40.0 -0.0H	45.0 -0.0H	
SFC	571	-10.0	-8.0	-5.0	-3.6	-1.9	.1	.6	1.0.1	12.0	14.0	18.0
950	1900	-19.4	-16.7	-12.7	-9.1	-6.4	-3.7	-3.4	10.0	13.2	15.9	26.2
900	3700	-19.7	-13.3	-9.9	-7.3	-4.7	-2.0	-1.7	11.1	13.9	17.7	23.7
850	4970	-16.2	-16.1	-12.7	-9.3	-6.6	-3.5	-2.9	9.3	12.4	16.5	25.0
800	6624	-19.7	-16.1	-12.6	-9.7	-6.1	-2.7	-4.1	10.9	14.3	17.2	20.8
750	8346	-20.8	-12.9	-8.8	-5.6	-1.8	-5.4	-1.8	13.4	17.2	20.4	24.5
700	10210	-22.1	-18.1	-13.3	-8.6	-5.0	-0.7	0.0	16.7	21.0	24.6	29.3
650	12162	-24.0	-19.1	-13.8	-8.4	-4.3	-1.6	-1.6	10.5	20.4	25.3	36.4
600	16470	-25.5	-20.1	-14.6	-8.2	-3.4	-1.4	-1.2	12.9	20.0	29.4	40.0
550	18878	-29.1	-21.3	-14.6	-8.0	-2.8	-3.3	-1.5	15.7	28.1	34.2	46.0
500	21457	-29.2	-22.4	-15.1	-7.9	-2.2	-4.5	-18.0	31.5	38.2	43.9	52.7
450	24370	-30.7	-22.1	-14.4	-6.7	-0.7	-6.4	-20.7	35.0	42.1	48.1	56.4
400	27434	-32.2	-23.9	-14.6	-6.3	-1.7	-7.9	-23.4	38.9	46.6	53.1	63.5
350	30925	-34.8	-30.2	-15.6	-7.8	-1.9	-9.5	-26.7	41.6	51.4	58.4	67.5
300	34911	-34.5	-30.7	-14.5	-7.5	-1.5	-9.6	-26.3	40.2	50.8	58.4	66.2
250	39610	-30.7	-21.0	-10.4	-5.2	-0.5	-10.2	-16.0	13.1	13.9	13.4	102.4
200	42356	-45.9	-21.6	-13.4	-4.5	-1.1	-11.1	-20.0	18.1	16.7	15.7	106.7
150	45492	-15.4	-15.4	-12.0	-5.2	-1.0	-11.4	-19.6	16.2	12.8	11.0	101.0
125	49157	-15.4	-15.4	-12.0	-5.2	-1.0	-11.7	-20.5	17.2	13.8	10.3	76.6
100	53503	-16.5	-10.5	-3.8	-2.4	-1.5	-2.4	-10.4	12.9	16.2	18.0	95.6
80	58027	-16.4	-11.7	-6.6	-1.5	-1.5	-1.5	-1.2	13.7	17.7	20.4	49.8
70	60676	-17.6	-13.2	-8.4	-3.6	-1.1	-4.5	-1.3	14.5	22.3	26.7	45.1
60	63770	-19.6	-11.5	-11.0	-6.0	-3.4	-3.4	-1.0	17.6	21.7	25.5	40.3
50	67457	-22.7	-16.5	-13.9	-9.3	-5.7	-5.7	-1.5	15.7	19.4	23.5	38.2
40	72111	-24.7	-20.5	-15.9	-11.3	-7.7	-7.7	-1.5	13.7	17.9	21.5	32.7
30	77949	-26.2	-22.4	-16.6	-11.0	-7.0	-7.0	-1.0	15.5	19.7	23.1	36.0
25	81745	-27.3	-22.1	-16.4	-11.7	-6.7	-6.7	-1.0	13.1	17.1	20.1	35.0
20	86444	-32.1	-25.4	-17.0	-8.9	-4.9	-4.9	-1.0	20.1	25.3	29.7	41.1
15	95566	-33.0	-25.5	-17.0	-8.9	-4.9	-4.9	-1.0	19.7	25.2	31.0	46.3
10	103191	-34.0	-25.6	-15.7	-8.9	-4.9	-4.9	-1.0	19.7	25.2	31.0	46.4

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 49. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: November

NO. OBSERVATIONS -- SURFACE = 749, TOP = 415

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)			MERIDIONAL WIND SPEED (KNOTS)			MERIDIONAL WIND SPEED (KNOTS)					
		1.0 -25.0	2.0 -25.0	5.0 -10.0	10.0 -10.0	15.0 -10.0	25.0 -10.0	50.0 -15.0	75.0 -15.0	90.0 -13.0	95.0 -13.0	97.73 +2SD	99.0 +2SD
SFC	571	-18.8	-16.7	-14.4	-12.2	-10.4	-8.3	-4.1	1	2.2	4.0	8.5	10.6
950	1900	-28.4	-25.0	-21.3	-17.7	-14.6	-11.4	-4.6	2.2	5.6	6.5	15.8	19.2
900	3399	-24.8	-21.7	-18.3	-14.9	-12.3	-9.2	-2.9	3.4	6.5	9.1	12.1	19.0
850	4970	-27.0	-24.2	-20.4	-16.6	-13.6	-10.1	-3.0	4.1	7.6	10.6	14.4	21.7
800	6624	-30.4	-26.6	-22.4	-18.2	-15.0	-11.2	-3.4	4.4	6.2	8.2	15.6	23.6
750	8366	-34.8	-30.4	-27.6	-20.8	-17.1	-12.7	-3.6	5.1	9.5	13.2	18.0	27.2
700	10210	-38.5	-33.6	-28.3	-22.9	-18.8	-13.9	-4.0	5.9	10.8	14.9	20.3	25.6
650	12142	-42.1	-36.7	-30.8	-24.9	-20.3	-14.9	-3.9	7.1	12.5	17.1	23.0	30.5
600	14249	-47.0	-34.2	-27.6	-22.4	-16.3	-13.9	-2.4	8.5	14.6	19.8	26.4	34.3
550	16410	-50.1	-43.5	-36.3	-29.1	-23.5	-16.9	-3.5	9.9	16.5	22.1	29.1	39.2
500	18878	-54.5	-47.2	-39.3	-31.4	-25.2	-17.9	-3.2	11.5	18.8	25.0	32.9	43.1
450	21467	-59.9	-51.8	-43.0	-34.2	-27.4	-19.3	-3.0	13.3	21.4	28.2	37.0	48.1
400	24218	-65.1	-56.6	-47.0	-37.4	-29.9	-21.1	-3.2	16.7	23.5	31.0	40.6	53.9
350	27434	-73.2	-63.3	-52.5	-41.7	-33.3	-23.4	-3.3	16.8	26.7	35.1	45.9	59.0
300	30225	-79.4	-68.5	-56.7	-44.8	-35.6	-24.7	-2.7	19.3	30.2	39.4	56.7	66.6
250	34911	-82.7	-71.3	-58.8	-46.4	-36.7	-25.3	-2.1	21.1	32.5	42.2	67.1	74.0
200	39610	-75.5	-65.0	-53.5	-42.0	-33.1	-22.6	-1.2	20.2	30.7	39.6	51.1	67.5
175	42336	-68.7	-59.1	-49.6	-38.1	-29.9	-20.3	-0.7	18.9	28.5	36.7	47.2	67.3
150	45192	-57.8	-49.6	-40.7	-31.7	-26.8	-16.6	0	16.6	24.8	31.0	40.7	57.8
125	49157	-48.2	-41.3	-33.8	-26.3	-20.5	-13.5	-3	14.2	21.1	26.9	34.4	49.6
100	53533	-36.3	-31.2	-25.6	-20.0	-15.7	-10.6	-0.2	10.2	15.3	21.1	34.9	48.6
80	58028	-26.9	-23.2	-19.2	-15.1	-12.0	-8.3	-0.8	6.7	10.4	13.5	20.8	35.9
70	60616	-23.4	-20.1	-16.5	-13.0	-10.2	-6.9	-0.3	6.3	9.6	12.4	19.5	25.3
60	63170	-19.0	-16.6	-13.9	-11.3	-9.2	-6.8	-1.6	3.2	5.6	7.7	10.3	15.4
50	67457	-18.5	-16.2	-13.7	-11.2	-9.2	-6.9	-2.2	2.5	4.8	6.8	9.3	13.0
40	72011	-17.1	-15.0	-12.7	-10.5	-8.7	-6.6	-2.4	1.6	3.9	5.7	7.9	11.8
30	77949	-16.0	-14.1	-12.0	-9.9	-8.2	-6.3	-1.7	1.7	3.6	5.3	7.4	14.1
25	81145	-15.8	-13.8	-11.6	-9.5	-7.8	-5.8	-1.6	2.2	4.2	5.9	8.0	11.4
20	86444	-17.4	-15.1	-12.6	-10.1	-8.1	-5.9	-1.3	3.3	5.6	7.5	10.0	12.2
15	92256	-21.2	-18.3	-15.1	-12.0	-9.5	-6.6	-0.7	5.2	8.1	10.6	13.7	14.6
10	101314	-24.9	-21.3	-17.4	-13.5	-10.4	-6.8	.5	7.8	11.4	14.5	18.4	22.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 50. Cumulative Frequency Distribution of Upper Winds (Scalars) at Standard Pressure Levels for San Nicolas Island: December

NU. OBSERVATIONS == SURFACE == 662. TMP == 38°

PRESSURE LEVEL (INBS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (INCHES)									
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
SFC	571	0	0	1.1	2.8	4.8	8.8	12.8	14.8	16.5	18.6
950	1900	0	0	1.4	4.0	7.0	13.2	19.4	22.4	25.0	28.3
900	3346	0	0	2.0	6.4	7.2	12.9	18.6	21.4	23.6	26.4
850	4948	0	0	3.5	5.9	9.7	16.4	20.1	22.9	25.3	28.3
800	6598	0	0	1.1	4.5	7.2	10.3	16.7	23.1	26.2	28.9
750	8317	0	0	1.3	5.2	8.2	11.8	19.0	26.2	29.8	32.8
700	10151	0	0	1.0	5.4	8.9	13.0	21.3	29.6	33.7	37.2
650	12087	0	0	0.9	5.9	9.4	14.4	23.7	33.0	37.6	41.5
600	14160	0	0	0.9	6.5	10.5	15.9	26.2	36.5	41.6	45.9
550	16365	0	0	1.1	7.3	12.1	17.8	29.3	40.8	46.5	51.3
500	18757	0	0	0.3	7.3	12.7	19.1	32.1	45.1	51.5	56.9
450	21322	0	0	0	7.7	13.4	21.0	35.5	50.0	57.2	63.3
400	24147	0	0	2.5	9.0	15.6	23.4	39.2	55.0	62.6	69.4
350	27244	0	0	2.0	11.1	16.2	26.5	43.5	60.5	68.4	75.9
300	30712	0	0	3.9	13.6	21.1	30.0	46.0	64.0	74.9	82.4
250	34662	0	0	6.3	16.2	24.0	33.1	51.7	70.3	79.4	87.2
200	39337	0	0	8.8	18.4	25.8	34.5	52.1	70.1	78.8	86.2
175	42097	0	0	9.2	18.5	25.6	34.1	51.3	68.5	77.0	84.2
150	45240	0	0	10.1	18.2	24.5	31.9	47.0	62.1	69.5	75.5
125	48934	0	0	3.1	10.1	17.1	22.5	28.9	41.9	54.9	61.3
100	53402	0	0	2.4	8.0	13.6	17.9	23.0	33.4	43.8	48.9
80	57844	0	0	2.6	7.4	11.1	15.5	26.4	33.3	37.7	41.4
70	60505	0	0	2.3	6.1	9.1	12.6	19.4	27.0	30.5	33.5
60	63596	0	0	0	2.4	5.2	8.5	15.2	21.9	25.2	28.0
50	67240	0	0	0	2.3	4.4	7.3	12.7	18.1	20.8	23.1
40	71024	0	0	0	1.4	3.7	6.4	12.0	17.4	20.3	22.6
30	77749	0	0	0	1.7	4.4	7.5	13.9	20.3	23.4	26.1
25	81515	0	0	0	2.0	6.9	9.3	15.3	22.3	25.7	28.6
20	86207	0	0	0	1.7	5.5	9.9	16.9	27.9	32.3	36.1
15	92297	0	0	0	1.0	4.1	9.1	15.0	27.1	45.1	50.1
10	100958	0	0	1.7	9.9	16.1	23.8	34.4	61.9	68.3	76.5

Table 51. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for San Nicolas Island: December
NO. OBSERVATIONS -- SURFACE = 462, TOP = 384

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	2.2A		5.0		10.0		15.87		25.0		50.0		75.0		84.13		90.0		95.0		97.73		99.0		
		-250	+250	-150	+150	-100	+100	-50	+50	-25	+25	-15	+15	-10	+10	-5	+5	-2	+2	-1	+1	-0.5	+0.5	-0.25	+0.25	
SFC	571	-10.8	-8.7	-6.4	-4.2	-2.4	-0.3	3.9	8.1	10.2	12.0	14.2	16.5	18.6												
950	1900	-23.2	-19.5	-15.5	-11.4	-8.3	-4.6	2.9	10.4	14.1	17.2	21.3	25.3	29.0												
900	3386	-22.9	-19.3	-15.3	-11.4	-8.3	-4.7	2.7	10.1	13.7	16.8	20.7	24.7	28.3												
850	4948	-23.2	-19.4	-15.3	-11.1	-7.9	-4.1	3.6	11.3	15.1	18.3	22.5	26.6	30.4												
800	6598	-24.0	-19.9	-15.4	-10.9	-7.4	-3.3	5.1	13.5	17.6	21.1	25.6	30.1	34.2												
750	8317	-25.4	-20.4	-15.8	-10.8	-6.9	-2.3	7.0	16.3	20.9	26.8	30.8	34.8	39.4												
700	10151	-26.3	-21.3	-15.8	-10.3	-6.0	-1.0	9.3	19.6	24.6	28.9	34.4	39.9	44.9												
650	12087	-28.2	-22.6	-16.6	-10.4	-5.6	-1.4	1.4	22.8	28.4	33.2	39.3	45.4	51.0												
600	14160	-29.4	-23.3	-16.7	-10.1	-4.9	1.2	13.5	25.8	31.9	37.1	43.7	50.3	56.4												
550	16365	-30.4	-23.8	-16.6	-9.4	-3.8	2.8	16.2	29.6	36.2	41.8	49.0	56.2	62.8												
500	18757	-32.2	-25.0	-17.0	-9.2	-3.1	4.1	16.4	33.5	40.7	46.8	54.7	62.6	69.8												
450	21322	-36.2	-28.1	-19.3	-10.5	-3.7	4.4	20.7	37.0	45.1	51.9	60.7	69.5	77.6												
400	24147	-39.7	-30.8	-21.1	-11.4	-3.9	5.0	23.0	41.0	49.9	57.4	67.1	76.8	85.7												
350	27244	-42.1	-32.5	-22.0	-11.5	-3.3	6.3	25.0	45.5	55.1	63.3	73.8	84.3	93.9												
300	30712	-43.2	-32.9	-21.7	-10.4	-1.7	8.6	29.5	50.4	60.7	69.4	80.7	91.9	102.2												
250	34662	-39.9	-29.5	-18.2	-6.8	2.0	12.4	33.5	54.6	65.0	73.8	85.2	96.5	106.9												
200	39337	-32.2	-22.3	-11.5	-0.7	7.7	17.6	31.7	57.8	67.7	76.1	86.9	97.7	107.6												
175	42047	-26.3	-17.0	-6.8	3.3	11.2	20.5	39.4	58.3	67.6	75.5	85.6	95.8	105.1												
150	45240	-19.3	-11.7	-2.4	6.4	13.2	21.3	37.6	53.9	62.0	68.8	77.6	86.4	94.5												
125	48934	-14.6	-7.7	-0.1	7.4	13.3	20.7	34.7	48.4	55.3	61.2	68.7	76.3	83.2												
100	53402	-13.4	-7.6	-1.3	5.0	9.9	15.7	27.4	39.1	44.9	49.8	56.1	62.4	68.2												
80	57844	-14.7	-9.9	-4.6	-1.6	4.7	9.5	19.3	29.1	33.9	38.0	43.2	48.5	53.3												
70	60505	-14.2	-10.1	-5.6	-1.1	2.4	6.5	14.9	23.3	27.4	30.9	35.4	39.9	44.0												
60	63596	-17.3	-13.5	-9.4	-5.3	-2.1	1.7	9.3	16.9	20.7	23.9	28.0	32.1	35.9												
50	67280	-18.5	-15.2	-11.5	-7.8	-4.9	-1.5	5.4	12.3	15.7	18.6	22.3	26.0	29.4												
40	71824	-23.5	-19.7	-15.6	-11.5	-8.3	-4.5	-1.5	10.7	14.5	17.7	21.8	25.9													
30	77749	-26.9	-22.5	-17.7	-12.9	-9.2	-4.8	4.1	13.0	17.4	21.1	25.9	30.7	35.1												
25	81535	-27.7	-22.9	-17.7	-12.5	-8.5	-3.7	5.0	15.5	20.3	24.3	29.5	34.7	39.5												
20	86207	-32.3	-26.3	-19.7	-13.2	-8.1	-2.1	10.1	22.3	28.3	33.4	39.9	46.5	52.5												
15	92227	-35.2	-27.5	-19.1	-10.7	-4.1	3.6	19.3	35.0	42.7	49.3	57.7	66.1	73.8												
10	100958	-36.1	-26.4	-16.2	-5.9	2.2	11.7	21.0	50.3	59.4	67.9	78.2	88.6	98.1												

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

NO. OBSERVATIONS -- SURFACE = 662. TOP = 384

Table 52. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for San Nicolas Island: December

PRESSURE LEVEL (INAS)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)									
		5.0	10.0	15.0	25.0	50.0 MEAN	75.0	90.0 0.15N	95.0	97.73 +250	99.0
SFC	571	-19.0	-16.9	-12.4	-8.5	-0.1	2.1	3.8	6.0	8.3	10.4
950	1900	-28.3	-25.0	-21.4	-17.9	-15.1	-11.8	-5.2	4.7	7.5	17.9
900	3396	-26.7	-23.5	-20.0	-16.6	-13.9	-10.7	-4.7	2.1	5.3	16.6
850	4548	-29.7	-26.2	-22.3	-18.5	-15.5	-12.0	-6.8	2.4	5.9	16.1
800	6548	-34.5	-30.4	-26.0	-21.5	-18.1	-14.0	-5.6	2.4	6.5	20.1
750	8317	-38.9	-34.3	-29.3	-24.4	-20.5	-15.9	-6.7	2.5	7.1	12.7
700	10151	-43.1	-38.0	-32.5	-26.9	-22.6	-17.5	-7.5	3.1	6.2	12.5
650	12087	-46.4	-41.1	-35.1	-29.1	-24.5	-19.0	-7.9	3.2	6.7	13.3
600	14160	-51.1	-45.1	-41.5	-31.9	-26.9	-20.8	-6.5	3.8	9.8	19.3
550	16365	-56.1	-49.5	-42.3	-35.0	-29.4	-22.8	-9.3	4.2	10.1	16.9
500	18757	-60.1	-53.7	-45.4	-37.5	-31.4	-24.2	-9.5	5.7	12.4	21.5
450	21322	-67.1	-59.2	-50.4	-41.6	-34.7	-26.6	-10.2	6.2	14.3	20.9
400	24147	-73.4	-64.7	-55.0	-45.3	-37.8	-28.9	-10.9	7.1	16.0	23.5
350	27246	-80.5	-70.7	-60.0	-50.0	-49.4	-41.1	-31.3	11.5	18.3	26.4
300	30712	-87.4	-76.8	-65.2	-53.7	-44.7	-34.1	-12.6	6.9	19.5	26.5
250	34642	-92.1	-81.0	-61.7	-50.4	-41.0	-35.6	-12.4	10.0	21.3	30.8
200	39337	-85.1	-74.7	-63.4	-52.0	-43.2	-32.8	-11.7	9.4	19.8	28.6
175	42047	-77.4	-67.9	-57.4	-46.8	-38.6	-28.9	-9.3	10.3	20.6	38.8
150	45240	-56.7	-58.7	-49.2	-60.9	-52.9	-42.5	-7.5	9.5	17.4	32.2
125	48974	-56.9	-49.8	-42.1	-36.4	-29.4	-21.3	-7.0	7.3	14.4	37.0
100	53472	-43.8	-38.4	-32.5	-26.5	-21.9	-16.5	-5.4	5.7	11.1	21.7
80	57844	-34.7	-30.5	-25.9	-21.4	-17.8	-11.6	-5.1	3.4	7.6	21.7
70	60505	-28.9	-25.5	-21.8	-19.2	-15.3	-11.9	-5.1	1.7	5.1	15.7
60	63596	-27.4	-24.2	-20.7	-17.1	-14.4	-11.2	-4.4	2.0	5.2	11.6
50	67240	-24.2	-21.4	-18.4	-15.4	-13.0	-10.2	-4.4	1.0	3.6	12.2
40	71824	-21.7	-19.2	-16.5	-13.7	-11.6	-9.1	-4.0	1.1	3.6	13.7
30	77749	-23.9	-21.2	-18.2	-15.3	-13.0	-10.3	-4.8	0.7	3.4	11.6
25	81535	-25.2	-22.2	-18.9	-15.6	-13.1	-10.1	-4.0	2.1	5.1	10.9
20	86227	-26.0	-22.9	-19.5	-16.1	-13.5	-10.4	-4.1	2.2	5.3	11.3
15	92237	-29.4	-26.2	-22.2	-18.1	-15.0	-11.3	-3.6	3.7	7.4	14.7
10	100958	-40.5	-35.3	-29.6	-23.9	-19.4	-14.2	-3.5	7.2	12.4	22.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 53. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: Annual

NO. OBSERVATIONS == SURFACE == 3136. TOP == 1969.

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)											
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 +150	94.13 +150	90.0 +150	95.0 +250	97.73 +250
SFC	13	0	0	0	0	0	0	0	0	0	0	0	0
1900	449	0	0	0	0	0	0	0	0	0	0	0	0
950	1877	0	0	0	0	0	0	0	0	0	0	0	0
900	3376	0	0	0	0	0	0	0	0	0	0	0	0
850	4957	0	0	0	0	0	0	0	0	0	0	0	0
800	6621	0	0	0	0	0	0	0	0	0	0	0	0
750	8316	0	0	0	0	0	0	0	0	0	0	0	0
700	10276	0	0	0	0	0	0	0	0	0	0	0	0
650	12192	0	0	0	0	0	0	0	0	0	0	0	0
600	14245	0	0	0	0	0	0	0	0	0	0	0	0
550	16522	0	0	0	0	0	0	0	0	0	0	0	0
500	18934	0	0	0	0	0	0	0	0	0	0	0	0
450	21549	0	0	0	0	0	0	0	0	0	0	0	0
400	24330	0	0	0	0	0	0	0	0	0	0	0	0
350	27513	0	0	0	0	0	0	0	0	0	0	0	0
300	31017	0	0	0	0	0	0	0	0	0	0	0	0
250	35013	0	0	0	0	0	0	0	0	0	0	0	0
200	39141	0	0	0	0	0	0	0	0	0	0	0	0
175	42507	0	0	0	0	0	0	0	0	0	0	0	0
150	45664	0	0	0	0	0	0	0	0	0	0	0	0
125	49360	0	0	0	0	0	0	0	0	0	0	0	0
100	53819	0	0	0	0	0	0	0	0	0	0	0	0
80	58314	0	0	0	0	0	0	0	0	0	0	0	0
70	61007	0	0	0	0	0	0	0	0	0	0	0	0

Table 54. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California. Annual

NO. OBSERVATIONS -- SURFACE = 3136. TOP = 1969

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	2,700		5,000		10,000		15,000		25,000		ZONAL WIND SPEED (KNOTS)		ZONAL WIND SPEED (KNOTS)		
		-250	+250	-150	+150	-50	+50	-150	+150	-50	+50	-150	+150	-50	+50	
SFC	13	-15.5	-13.2	-10.7	-8.2	-6.2	-3.9	-0.6	5.5	7.8	9.8	12.3	14.8	17.1	17.5	
1000	449	-17.9	-15.4	-12.7	-9.9	-7.8	-5.3	-0.2	4.9	7.4	9.5	12.3	15.0	17.5	18.5	
1950	1877	-22.1	-19.2	-16.1	-12.9	-10.5	-7.6	-1.4	4.0	6.9	9.3	12.5	15.6	17.4	20.4	
900	3376	-22.0	-19.0	-15.7	-12.4	-10.9	-6.9	-0.4	5.3	8.3	10.8	13.0	16.1	19.6	22.9	
850	4957	-20.9	-17.3	-14.4	-11.0	-9.4	-5.3	1.0	7.3	10.4	13.0	16.0	19.4	22.9	27.1	
800	6621	-21.3	-17.0	-14.2	-10.4	-7.5	-4.1	2.0	9.9	13.3	16.2	20.0	23.7	27.1	33.1	
750	8374	-22.9	-18.9	-14.6	-10.3	-6.9	-2.9	5.1	13.1	17.1	20.5	24.8	29.1	33.1	39.8	
700	10226	-24.3	-19.9	-14.9	-10.1	-6.3	-1.8	7.2	16.2	20.7	24.5	29.3	34.2	38.7	44.8	
650	13192	-26.4	-21.4	-15.9	-10.4	-6.1	-1.1	9.2	19.5	24.5	26.8	34.3	39.8	45.1	50.7	
600	16285	-28.1	-22.5	-16.4	-10.3	-5.6	-0.9	11.3	22.6	32.2	35.2	39.0	44.9	51.1	57.3	
550	16522	-29.9	-23.7	-17.0	-10.2	-5.1	-1.2	13.7	26.2	37.2	44.4	51.1	56.7	63.4	70.6	
500	18934	-21.6	-26.9	-17.6	-10.2	-4.5	-2.2	15.9	29.6	36.3	42.0	49.4	56.7	63.2	70.6	
450	21549	-34.2	-26.9	-18.7	-10.6	-4.3	-3.1	18.2	33.3	40.7	47.0	55.4	63.1	69.4	76.5	
400	23450	-36.7	-28.5	-19.6	-10.7	-3.8	-4.4	20.9	45.6	52.5	61.4	70.3	76.5	83.8	90.8	
350	27513	-38.2	-29.4	-19.8	-10.2	-7.4	-6.0	23.8	41.6	50.4	57.8	67.4	77.3	85.8	94.5	
300	31017	-39.7	-30.2	-19.8	-9.5	-1.4	8.1	27.1	46.7	64.3	74.6	85.0	91.8	101.7	109.7	
250	35013	-37.7	-27.4	-17.0	-6.3	2.1	12.0	32.6	52.0	61.9	70.3	81.0	91.8	102.5	112.3	
200	39741	-31.7	-22.2	-11.8	-1.5	6.6	16.1	15.4	44.7	64.2	72.3	82.6	93.0	102.5	112.3	122.8
175	42567	-26.2	-17.4	-8.2	-1.2	6.5	17.1	14.6	52.1	60.7	68.0	77.4	86.8	95.4	105.8	115.4
150	45666	-21.4	-13.4	-5.5	2.8	9.7	16.8	12.2	47.6	55.2	61.6	69.9	76.2	85.8	95.8	105.8
125	49160	-19.7	-13.1	-5.9	1.2	6.6	13.4	26.7	40.0	46.6	52.2	59.3	66.5	73.1	80.1	87.1
100	53819	-22.1	-16.4	-10.2	-4.1	6.8	6.5	18.6	29.5	35.2	40.0	46.2	52.4	59.1	66.2	73.1
80	56314	-25.2	-22.3	-14.9	-9.6	-5.4	-0.5	9.5	19.5	24.4	28.6	33.9	39.3	46.2	53.1	60.1
70	61007	-27.1	-22.5	-17.5	-12.6	-6.7	-4.1	5.1	14.3	18.9	22.6	27.7	32.7	37.3	44.2	51.1

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 55. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Annual

NO. OBSERVATIONS -- SURFACE = 3136. TOP = 1969

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	PERIODICAL WIND SPEED (KNOTS)									
		1.0 -250	2.0 -250	5.0 -150	15.0 -150	35.0 -150	85.0 -150	250.0 MEAN	500.0 MEAN	900.0 +150	950.0 +150
SFC	13	-15.4	-13.4	-11.2	-9.0	-7.3	-5.3	-1.2	2.9	4.9	6.6
1000	449	-15.6	-13.6	-11.4	-9.2	-7.5	-5.5	-1.4	2.7	4.7	6.4
950	1877	-16.4	-14.3	-12.0	-9.6	-7.8	-5.7	-1.3	3.1	5.2	6.6
900	3376	-16.6	-14.5	-12.2	-9.8	-8.0	-6.5	-1.5	2.9	5.0	7.0
850	4957	-18.6	-16.6	-14.2	-10.9	-8.9	-6.5	-1.4	3.3	5.7	7.7
800	6621	-20.4	-18.2	-13.6	-10.9	-8.9	-6.3	-1.4	4.7	7.9	10.6
750	8376	-26.3	-21.9	-17.7	-14.2	-11.5	-10.1	-1.0	1.4	1.4	1.4
700	10226	-34.4	-29.8	-21.9	-19.7	-17.5	-14.1	-1.0	1.9	1.9	1.9
650	12192	-38.4	-33.2	-27.5	-21.9	-17.5	-15.8	-1.2	1.2	1.2	1.2
600	14285	-42.7	-36.9	-30.6	-24.3	-19.4	-13.6	-1.0	0.7	1.3	1.3
550	16522	-46.0	-39.4	-33.0	-26.2	-20.9	-14.7	-1.0	0.7	1.0	1.0
500	18934	-49.7	-42.9	-35.5	-28.1	-22.4	-15.6	-1.0	0.7	1.0	1.0
450	21549	-53.8	-46.4	-38.4	-30.3	-24.1	-16.7	-1.0	0.8	1.0	1.0
400	24390	-59.2	-51.1	-42.2	-33.4	-26.5	-19.4	-1.0	0.7	1.0	1.0
350	27513	-61.1	-55.2	-45.5	-35.8	-28.2	-19.3	-1.0	0.7	1.0	1.0
300	31017	-69.8	-60.1	-49.3	-38.7	-30.4	-20.6	-1.0	0.7	1.0	1.0
250	35013	-73.0	-62.6	-51.3	-40.0	-31.2	-20.8	-1.0	0.7	1.0	1.0
200	39741	-66.0	-58.1	-47.3	-36.5	-28.1	-18.2	-1.0	0.7	1.0	1.0
175	42507	-59.1	-50.3	-40.7	-31.1	-23.6	-14.8	-1.0	0.7	1.0	1.0
150	45666	-50.6	-43.0	-34.7	-26.4	-19.9	-12.3	-1.0	0.7	1.0	1.0
125	49360	-40.6	-34.6	-28.0	-21.4	-16.3	-10.3	-1.0	0.7	1.0	1.0
100	53839	-36.9	-26.3	-21.4	-16.6	-12.8	-8.3	-0.7	0.7	1.0	1.0
80	58314	-22.5	-20.2	-16.6	-13.0	-10.2	-6.9	-0.7	0.5	0.8	1.0
70	610n7	-20.2	-17.4	-14.4	-11.4	-9.0	-6.2	-0.4	0.5	0.8	1.0

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 56. Cumulative Frequency Distribution of Upper Winds (Scalor) at Standard Pressure Levels for Point Mugu, California: Winter

NO. OBSERVATIONS = SURFACE = TRA. TOP = 454

PRESSURE LEVEL (INAS)	MEAN HEIGHT (FTS)	SCALAR WIND SPEED (KNOTS)										90.0 0.15N	97.7 0.25D
		25.0 -150	50.0 0	10.0 150	15.0 -150	25.0 0	50.0 150	75.0 -150	90.0 0	97.7 150	99.0 -150		
SFC	1.9	0	0	0	0	4.5	9.1	13.7	15.9	17.8	20.3	22.7	24.9
1000	51.8	0	0	0	0	4.4	9.6	15.2	17.9	20.2	23.1	26.0	28.7
950	1929	0	0	0	0	4.9	11.2	17.5	20.6	23.2	26.6	30.9	33.1
900	409	0	0	0	0	5.4	11.3	17.2	20.1	22.6	25.7	29.9	31.6
350	57	0	0	0	0	4.0	6.6	11.8	17.0	19.6	21.8	24.6	27.4
800	18	0	0	0	0	5.9	8.8	14.7	20.6	23.5	26.0	29.1	32.3
750	8314	0	0	0	0	3.4	7.4	11.3	16.5	25.7	29.2	36.0	42.4
700	16128	0	0	0	0	1.0	4.8	9.2	13.3	21.7	30.1	37.7	42.2
650	12664	0	0	0	0	1.2	5.7	9.7	13.3	21.7	30.1	40.7	50.6
600	14117	0	0	0	0	1.4	6.6	11.6	16.9	24.9	39.2	43.2	52.5
550	16322	0	0	0	0	1.2	7.0	11.6	17.0	27.9	44.7	48.8	54.9
500	18631	0	0	0	0	2.6	9.1	13.9	19.6	21.7	42.6	48.9	53.3
450	21263	0	0	0	0	2.8	9.8	15.3	21.7	16.4	47.9	50.1	59.8
400	24054	0	0	0	0	4.4	11.6	17.6	24.4	18.3	42.2	59.0	72.2
350	27146	0	0	0	0	4.5	12.8	19.3	27.0	42.5	58.0	65.7	80.5
300	30594	0	0	0	0	6.0	14.9	21.0	30.1	46.8	43.5	71.7	96.6
250	34521	0	0	0	0	7.6	17.3	24.8	33.6	51.6	49.6	78.4	85.4
200	39177	0	0	0	0	1.6	11.5	21.3	29.0	38.0	56.4	74.8	93.6
175	41916	0	0	0	0	3.7	12.8	22.4	29.8	38.5	56.3	74.1	92.1
150	45098	0	0	0	0	6.4	14.6	22.9	29.3	36.9	52.7	67.5	75.1
125	48819	0	0	0	0	1.1	15.1	22.3	28.0	34.7	46.2	41.7	68.4
100	53317	0	0	0	0	8.7	14.6	20.6	25.2	30.6	41.7	52.8	62.8
80	57785	0	0	0	0	3.3	6.7	11.1	15.6	19.5	23.9	32.7	45.3
70	60456	0	0	0	0	1.8	6.3	11.1	15.6	19.7	23.9	31.1	41.4
						2.5	7.4	11.1	16.4	19.2	25.4	28.4	34.3
						4.1	7.4	11.0	13.0	13.0	19.2	25.4	37.6

Table 57. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Winter

NO. OBSERVATIONS -- SURFACE = 788, TOP = 454

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SURFACE			2500			5000			7500			TOTAL WIND SPEED (IN FEET PER SECOND)		
		1.0	2.28	5.0	-10.0	15.67	-25.0	-150	50.0	75.0	-150	A6.13	90.0	95.0	97.73	99.0
SFC	13	-19.4	-16.9	-14.1	-11.4	-9.2	-6.7	-1.5	3.7	6.7	8.4	11.1	13.9	16.4		
1000	514	-23.8	-20.9	-17.7	-14.5	-12.0	-9.1	-3.1	2.9	5.8	8.3	11.5	14.7	17.6		
950	1929	-29.4	-25.8	-21.8	-17.9	-14.8	-11.2	-3.5	3.6	7.2	10.3	14.2	18.2	21.8		
900	3609	-27.4	-23.8	-19.8	-15.9	-12.8	-9.2	-1.4	5.6	9.2	12.3	16.2	20.2	23.8		
850	4957	-24.1	-20.6	-16.7	-12.9	-9.9	-6.4	-0.5	6.0	11.5	14.5	18.3	22.2	25.7		
800	6598	-23.4	-19.5	-15.3	-11.1	-7.4	-3.9	3.9	11.7	15.6	18.9	23.1	27.3	31.2		
750	8314	-23.4	-19.0	-14.2	-9.5	-5.8	-1.4	7.4	16.2	20.6	24.3	29.0	33.8	38.2		
700	10128	-23.5	-18.7	-13.4	-8.2	-4.1	-0.7	10.5	20.3	25.1	29.2	34.4	39.7	44.5		
650	12064	-24.6	-19.2	-13.3	-7.5	-2.9	2.5	13.4	24.3	29.7	34.3	40.1	46.0	51.4		
600	14117	-26.6	-20.6	-14.1	-7.5	-2.5	3.5	15.6	27.7	33.7	38.8	45.3	51.8	57.6		
550	16322	-26.7	-20.3	-13.3	-6.3	-0.9	5.5	18.5	31.5	37.9	43.3	50.3	57.3	63.7		
500	18691	-28.9	-21.7	-13.9	-6.1	-0.0	7.2	21.7	36.2	43.4	49.5	57.3	65.1	72.3		
450	21261	-32.4	-24.4	-15.7	-7.0	-0.3	7.7	23.8	39.9	47.9	54.6	63.3	72.0	80.0		
400	24058	-35.8	-26.9	-17.2	-7.5	-0.0	6.9	26.9	46.9	53.8	61.3	71.0	80.6	89.6		
350	27146	-38.4	-28.7	-18.1	-7.5	-0.7	10.4	30.1	49.8	59.5	67.7	78.3	88.9	90.6		
300	30594	-39.3	-28.9	-17.6	-6.3	2.5	12.9	33.9	54.9	65.3	74.1	85.4	96.7	107.1		
250	34521	-36.0	-25.3	-13.7	-2.0	7.0	17.7	39.3	60.9	71.6	80.6	92.3	103.9	111.6		
200	39177	-25.8	-16.0	-5.3	5.3	13.6	23.4	43.2	61.0	72.8	81.1	91.7	102.4	112.2		
175	41916	-18.4	-10.0	-0.6	8.8	16.1	24.7	42.2	59.7	68.3	75.6	85.0	94.4	103.0		
150	45039	-13.4	-5.9	-2.3	10.5	16.9	24.4	39.7	55.0	62.5	69.9	77.1	85.3	92.8		
125	48819	-9.7	-3.4	3.5	10.4	15.9	22.1	35.0	47.9	54.2	59.6	66.5	73.4	79.7		
100	53317	-10.3	-5.6	-0.8	6.6	11.1	16.4	27.2	38.0	43.3	47.8	53.6	59.4	66.7		
80	57745	-12.8	-6.3	-3.4	1.4	5.2	9.7	18.7	27.7	32.2	36.0	40.8	45.7	50.2		
70	60456	-14.2	-10.2	-5.8	-1.5	1.9	5.9	14.6	22.1	26.1	29.5	33.8	38.2	42.7		

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 58. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California Winter

NO. OBSERVATIONS -- SURFACE = 78A. TOP = 454

PRESSURE LEVEL (INRS)	MEAN WEIGHT (FT)	MERIDIONAL WIND SPEED (FEET) MEAN				MERIDIONAL WIND SPEED (FEET) MEAN				MERIDIONAL WIND SPEED (FEET) MEAN			
		1.0	2.0	5.0	10.0	15.0	25.0	50.0	75.0	95.0	97.5	99.0	
SFC	13	-20.7	-18.1	-15.7	-13.1	-11.1	-9.7	-8.0	-6.3	-5.3	-7.9	-10.5	-12.9
1000	518	-21.7	-19.7	-16.5	-13.7	-11.4	-9.1	-7.1	-5.1	-6.5	-8.5	-11.2	-13.7
950	1929	-22.5	-19.9	-16.1	-14.1	-11.9	-9.3	-7.0	-5.1	-6.3	-8.2	-12.1	-16.7
900	3469	-22.9	-20.1	-17.1	-14.1	-11.7	-9.9	-7.7	-5.7	-6.1	-7.5	-10.5	-14.3
850	4957	-23.2	-20.3	-17.2	-14.0	-11.6	-9.7	-7.9	-5.9	-6.2	-7.9	-11.4	-16.5
800	6558	-29.9	-16.2	-22.2	-18.1	-16.0	-11.3	-9.4	-7.7	-10.5	-14.6	-19.6	22.6
750	8214	-31.2	-33.6	-28.6	-23.5	-19.6	-14.0	-10.6	-8.4	-12.3	-17.4	22.4	27.5
700	10128	-44.1	-38.6	-31.0	-27.1	-22.6	-17.3	-13.4	-9.4	-14.3	-20.2	26.0	31.1
650	12064	-49.2	-43.1	-36.9	-30.4	-25.4	-19.5	-14.5	-9.5	-10.4	-15.4	20.3	24.9
600	14117	-55.7	-48.6	-41.3	-34.4	-28.4	-21.7	-16.7	-12.0	-17.7	-24.9	26.7	34.9
550	16322	-59.7	-52.5	-44.7	-36.9	-30.4	-23.6	-19.1	-14.5	-12.6	-16.7	26.5	31.5
500	18691	-64.9	-56.9	-48.3	-39.5	-33.1	-25.2	-19.7	-14.5	-14.5	-21.2	30.1	40.3
450	21263	-69.2	-60.9	-51.7	-42.5	-35.4	-27.0	-19.7	-15.4	-22.5	31.7	40.4	49.2
400	24058	-75.9	-66.7	-56.7	-46.4	-39.6	-30.6	-20.9	-17.5	-24.8	34.9	44.9	54.9
350	27146	-81.7	-71.7	-60.4	-49.4	-41.7	-31.3	-21.9	-16.9	-24.6	39.0	44.9	59.9
300	30594	-89.5	-78.5	-66.5	-54.5	-45.2	-36.2	-21.9	-16.7	-20.7	36.2	44.9	59.7
250	34521	-93.1	-81.7	-69.3	-56.9	-47.1	-35.9	-21.9	-16.9	-21.5	42.7	43.5	55.9
200	39177	-85.4	-74.9	-63.5	-52.1	-43.2	-32.7	-19.7	-14.5	-20.7	40.5	51.9	62.4
175	41916	-71.1	-62.4	-52.9	-43.5	-36.1	-27.4	-19.8	-16.5	-23.9	33.3	42.6	51.5
150	45028	-63.9	-56.5	-47.4	-38.9	-32.2	-22.3	-16.4	-13.5	-22.1	30.6	39.7	47.1
125	48819	-51.4	-45.2	-31.7	-18.4	-26.4	-20.2	-17.4	-11.2	-16.5	23.2	30.0	36.2
100	53217	-40.0	-35.1	-29.8	-26.5	-20.6	-16.5	-12.5	-9.0	-13.1	18.4	21.7	26.6
80	57745	-31.7	-28.6	-24.0	-20.0	-16.9	-13.2	-10.6	-7.4	-12.6	16.4	20.1	24.4
70	60456	-26.8	-23.7	-20.3	-16.9	-14.3	-11.2	-8.6	-5.6	-10.5	13.9	17.0	21.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 59. Cumulative frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: Spring
NO. OBSERVATIONS -- SURFACE = 813. TOP = 477

PRESSURE LEVEL (inches)	MEAN HEIGHT (FT.)	SCALAR WIND SPEED (KNOTS)									
		1.0	2.50	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
SFC	1.3	0	0	0	0	1.9	3.8	7.4	11.4	14.9	19.0
1000	.453	0	0	0	0	1.6	3.6	7.4	12.0	15.7	20.2
950	1873	0	0	0	0	1.2	3.4	7.9	12.4	14.6	18.9
900	3356	0	0	0	0	1.9	4.0	8.1	12.6	14.7	16.8
850	4918	0	0	0	0	2.2	4.0	10.5	14.9	17.0	18.8
800	6562	0	0	0	0	1.3	4.0	6.1	13.6	18.6	21.1
750	8301	0	0	0	0	1.7	4.2	7.0	10.3	16.9	21.1
700	10128	0	0	0	0	1.2	4.8	8.1	12.0	16.6	20.6
650	12073	0	0	0	0	1.5	5.1	9.0	13.7	17.2	20.0
600	14140	0	0	0	0	5.7	10.2	15.5	26.3	37.1	46.9
550	16355	0	0	0	0	1.4	6.9	11.9	17.8	29.9	42.0
500	18737	0	0	0	0	1.2	6.2	13.6	20.0	32.9	45.6
450	21319	0	0	0	0	1.3	6.9	14.9	21.9	36.2	50.5
400	24127	0	0	0	0	2.3	10.6	17.1	24.8	40.3	65.6
350	27220	0	0	0	0	4.1	12.0	19.6	27.6	43.8	69.0
300	30649	0	0	0	0	6.4	15.6	22.7	31.1	48.2	74.6
250	34623	0	0	0	0	8.4	18.1	25.6	34.5	52.5	79.5
200	39295	0	0	0	0	2.3	11.6	20.8	36.0	53.7	70.9
175	42037	0	0	0	0	4.8	12.9	20.1	27.4	34.9	50.0
150	45210	0	0	0	0	5.6	13.7	20.9	26.4	32.9	46.7
125	48963	1.9	0	0	0	7.2	13.0	16.6	23.3	39.4	59.2
100	53501	0	0	0	0	4.6	9.2	13.9	17.4	21.6	30.2
80	58035	0	0	0	0	6.6	2.7	6.5	9.5	13.0	20.7
70	60745	0	0	0	0	2.2	3.5	6.0	9.0	15.1	21.2

Table 6J. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California Spring

NO: OBSERVATIONS -- SIRACE = 011, DUP = 011

PRESSURE LEVEL	MEAN HEIGHT (MBSI)	ZONAL WIND SPEED (KNOTS)									
		2.02a -250	5.0 -100	10.0 -50	15.0 -10	20.0 -5	25.0 +5	30.0 +10	35.0 +15	40.0 +20	50.0 +25
SFC	1.3	-15.0	-12.6	-9.9	-7.3	-5.7	-4.2	-2.8	-2.2	-1.7	-1.3
1000	453	-17.1	-14.5	-11.6	-8.7	-6.5	-4.5	-3.0	-1.5	-0.9	-0.5
950	1073	-20.1	-17.2	-14.1	-10.9	-8.5	-6.7	-5.6	-2	-0.9	-0.5
900	3256	-18.7	-15.9	-12.9	-9.9	-7.6	-5.7	-4.7	-0.9	-0.7	-0.5
850	4914	-19.2	-16.1	-12.8	-9.4	-6.4	-4.7	-3.7	-2.5	-1.7	-1.7
800	6562	-20.0	-16.5	-12.7	-9.9	-6.9	-5.9	-4.2	-2.4	-1.8	-1.8
750	8371	-22.0	-17.8	-13.3	-10.7	-7.2	-5.2	-3.7	-1.0	-0.6	-0.6
700	10128	-23.7	-18.6	-12.9	-12.7	-7.1	-5.1	-3.1	-1.0	-0.6	-0.6
650	12071	-24.5	-18.5	-12.8	-12.1	-7.6	-5.6	-3.6	-2.6	-1.6	-1.6
600	14140	-24.5	-18.7	-12.4	-12.1	-7.2	-6.2	-4.4	-2.6	-1.6	-1.6
550	16355	-26.0	-19.7	-12.6	-12.6	-7.5	-6.5	-5.5	-3.7	-2.9	-2.9
500	18717	-26.9	-19.9	-12.3	-12.3	-7.7	-6.2	-5.2	-3.2	-2.7	-2.7
450	21319	-30.0	-22.7	-15.7	-15.2	-13.7	-11.4	-9.2	-5.0	-4.0	-4.0
400	24127	-32.7	-26.1	-16.7	-15.4	-13.9	-11.9	-9.5	-5.3	-4.5	-4.5
350	27218	-32.3	-23.3	-17.5	-15.7	-13.7	-12.9	-10.5	-6.5	-5.3	-5.3
300	30669	-32.3	-23.2	-17.2	-12.7	-12.2	-9.9	-15.5	-11.1	-6.3	-6.3
250	34623	-27.4	-17.3	-12.2	-11.3	-11.3	-10.3	-20.9	-10.4	-6.5	-6.5
200	39285	-19.2	-10.7	-0.3	-9.5	-7.2	-7.2	-26.2	-4.4	-3.0	-3.0
175	42037	-15.1	-6.9	-2.0	-11.0	-17.9	-17.9	-26.1	-4.2	-4.2	-4.2
150	45210	-15.2	-6.1	-8.4	-15.6	-7.6	-10.9	-27.6	-6.0	-6.7	-6.7
125	48953	-13.0	-2.6	-8.3	-14.2	-14.4	-14.4	-24.2	-15.7	-5.1	-5.1
100	53501	-3.4	-0.7	-5.4	-10.1	-13.4	-16.1	-26.9	-15.7	-4.0	-4.0
80	58075	-8.9	-5.2	-2.4	-9.8	-17.6	-17.6	-25.0	-16.7	-3.1	-3.1
70	60705	-12.0	-8.4	-4.0	-1.2	-1.7	-1.7	-22.3	-12.0	-2.3	-2.3

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 61. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Spring

NO. OBSERVATIONS == SURFACE == A13. TOP == 477

PRESSURE LEVEL (INRS)	MERIDIONAL WIND SPEED (KNOTS)									
	1.0			2.2P			5.0			10.0
	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	90.0
SFC	1.3	-12.9	-11.1	-9.1	-7.1	-5.5	-3.7	.1	3.9	7.3
1000	4.3	-13.8	-11.9	-9.8	-7.8	-6.2	-4.3	-0.5	3.3	5.7
1500	18.7	-13.4	-11.5	-9.4	-7.4	-5.8	-3.9	-0.1	3.7	5.2
2000	33.6	-15.2	-13.3	-11.2	-9.1	-7.4	-5.5	-1.5	2.5	4.4
2500	49.8	-19.5	-17.5	-14.4	-11.8	-9.7	-7.3	-2.1	2.7	5.1
3000	65.2	-26.2	-22.9	-19.3	-15.8	-13.0	-9.7	-3.1	3.5	6.8
3500	83.1	-33.0	-28.8	-24.2	-19.7	-16.1	-11.9	-3.4	5.1	9.3
4000	101.2	-37.2	-32.4	-27.1	-21.9	-17.8	-13.0	-3.2	6.6	12.9
4500	120.7	-43.0	-37.4	-31.2	-25.1	-20.3	-14.7	-3.2	8.3	11.4
5000	141.4	-48.0	-41.7	-34.8	-27.9	-22.5	-16.2	-3.3	8.3	13.9
5500	163.5	-51.3	-44.5	-37.0	-29.6	-23.8	-17.0	-3.1	9.6	16.7
6000	187.7	-55.2	-47.7	-40.6	-31.4	-25.1	-17.6	-2.5	10.8	17.6
6500	213.9	-59.0	-51.0	-42.3	-33.6	-26.9	-18.9	-2.8	12.6	20.1
7000	241.2	-64.3	-55.6	-46.1	-36.6	-29.2	-20.5	-2.8	13.3	21.3
7500	272.0	68.2	58.9	-48.7	-38.6	-30.7	-21.4	-2.5	14.9	23.6
8000	306.4	-72.8	-62.0	-52.1	-41.4	-33.0	-23.1	-2.1	16.4	25.7
8500	346.2	-75.8	-65.4	-54.1	-42.7	-33.9	-23.5	-2.1	16.9	26.9
9000	392.5	-67.5	-58.1	-47.9	-37.7	-29.7	-20.3	-2.4	18.7	29.1
9500	420.37	-54.3	-46.4	-37.8	-29.3	-22.6	-14.7	-1.3	17.7	27.1
10000	452.10	-46.9	-39.9	-32.3	-24.6	-18.7	-11.7	-1.2	17.1	25.0
10500	486.53	-37.2	-31.5	-25.3	-19.1	-14.3	-8.6	-1.7	16.7	23.7
11000	535.01	-27.9	-23.6	-18.9	-14.2	-10.5	-6.2	-1.4	14.4	20.1
11500	580.55	-20.2	-17.1	-13.7	-10.3	-7.6	-4.5	1.0	11.4	17.5
12000	637.45	-16.1	-13.6	-10.8	-8.1	-5.9	-3.4	1.8	7.0	9.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 62. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California - Summer

NO. OBSERVATIONS -- SURFACE = 151. TOP = 495

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT)	1.0			2.0			5.0			10.0			15.0			25.0			50.0			75.0			100.0			125.0			150.0			175.0			200.0			225.0			250.0			275.0			300.0			325.0			350.0			375.0			400.0			425.0			450.0			475.0			500.0			525.0			550.0			575.0			600.0			625.0			650.0			675.0			700.0			725.0			750.0			775.0			800.0			825.0			850.0			875.0			900.0			925.0			950.0			975.0			1000.0			1025.0			1050.0			1075.0			1100.0			1125.0			1150.0			1175.0			1200.0			1225.0			1250.0			1275.0			1300.0			1325.0			1350.0			1375.0			1400.0			1425.0			1450.0			1475.0			1500.0			1525.0			1550.0			1575.0			1600.0			1625.0			1650.0			1675.0			1700.0			1725.0			1750.0			1775.0			1800.0			1825.0			1850.0			1875.0			1900.0			1925.0			1950.0			1975.0			2000.0			2025.0			2050.0			2075.0			2100.0			2125.0			2150.0			2175.0			2200.0			2225.0			2250.0			2275.0			2300.0			2325.0			2350.0			2375.0			2400.0			2425.0			2450.0			2475.0			2500.0			2525.0			2550.0			2575.0			2600.0			2625.0			2650.0			2675.0			2700.0			2725.0			2750.0			2775.0			2800.0			2825.0			2850.0			2875.0			2900.0			2925.0			2950.0			2975.0			3000.0			3025.0			3050.0			3075.0			3100.0			3125.0			3150.0			3175.0			3200.0			3225.0			3250.0			3275.0			3300.0			3325.0			3350.0			3375.0			3400.0			3425.0			3450.0			3475.0			3500.0			3525.0			3550.0			3575.0			3600.0			3625.0			3650.0			3675.0			3700.0			3725.0			3750.0			3775.0			3800.0			3825.0			3850.0			3875.0			3900.0			3925.0			3950.0			3975.0			4000.0			4025.0			4050.0			4075.0			4100.0			4125.0			4150.0			4175.0			4200.0			4225.0			4250.0			4275.0			4300.0			4325.0			4350.0			4375.0			4400.0			4425.0			4450.0			4475.0			4500.0			4525.0			4550.0			4575.0			4600.0			4625.0			4650.0			4675.0			4700.0			4725.0			4750.0			4775.0			4800.0			4825.0			4850.0			4875.0			4900.0			4925.0			4950.0			4975.0			4990.0			5000.0			5025.0			5050.0			5075.0			5100.0			5125.0			5150.0			5175.0			5200.0			5225.0			5250.0			5275.0			5300.0			5325.0			5350.0			5375.0			5400.0			5425.0			5450.0			5475.0			5500.0			5525.0			5550.0			5575.0			5600.0			5625.0			5650.0			5675.0			5700.0			5725.0			5750.0			5775.0			5800.0			5825.0			5850.0			5875.0			5900.0			5925.0			5950.0			5975.0			6000.0			6025.0			6050.0			6075.0			6100.0			6125.0			6150.0			6175.0			6200.0			6225.0			6250.0			6275.0			6300.0			6325.0			6350.0			6375.0			6400.0			6425.0			6450.0			6475.0			6500.0			6525.0			6550.0			6575.0			6600.0			6625.0			6650.0			6675.0			6700.0			6725.0			6750.0			6775.0			6800.0			6825.0			6850.0			6875.0			6900.0			6925.0			6950.0			6975.0			7000.0			7025.0			7050.0			7075.0			7100.0			7125.0			7150.0			7175.0			7200.0			7225.0			7250.0			7275.0			7300.0			7325.0			7350.0			7375.0			7400.0			7425.0			7450.0			7475.0			7500.0			7525.0			7550.0			7575.0			7600.0			7625.0			7650.0			7675.0			7700.0			7725.0			7750.0			7775.0			7800.0			7825.0			7850.0			7875.0			7900.0			7925.0			7950.0			7975.0			8000.0			8025.0			8050.0			8075.0			8100.0			8125.0			8150.0			8175.0			8200.0			8225.0			8250.0			8275.0			8300.0			8325.0			8350.0			8375.0			8400.0			8425.0			8450.0			8475.0			8500.0			8525.0			8550.0			8575.0			8600.0			8625.0			8650.0			8675.0			8700.0			8725.0			8750.0			8775.0			8800.0			8825.0			8850.0			8875.0			8900.0			8925.0			8950.0			8975.0			9000.0			9025.0			9050.0			9075.0			9100.0			9125.0			9150.0			9175.0			9200.0			9225.0			9250.0			9275.0			9300.0			9325.0			9350.0			9375.0			9400.0			9425.0			9450.0			9475.0			9500.0			9525.0			9550.0			9575.0			9600.0			9625.0			9650.0			9675.0			9700.0			9725.0			9750.0			9775.0			9800.0			9825.0			9850.0			9875.0			9900.0			9925.0			9950.0			9975.0			10000.0			10025.0			10050.0			10075.0			10100.0			10125.0			10150.0			10175.0			10200.0			10225.0			10250.0			10275.0			10300.0			10325.0			10350.0			10375.0			10400.0			10425.0			10450.0			10475.0			10500.0			10525.0			10550.0			10575.0			10600.0			10625.0			10650.0			10675.0			10700.0			10725.0			10750.0			10775.0			10800.0			10825.0			10850.0			10875.0			10900.0			10925.0			10950.0			10975.0			11000.0			11025.0			11050.0			11075.0			11100.0			11125.0			11150.0			11175.0			11200.0			11225.0			11250.0			11275.0			11300.0			11325.0			11350.0			11375.0			11400.0			11425.0			11450.0			11475.0			11500.0			11525.0			11550.0			11575.0			11600.0			11625.0			11650.0			11675.0			11700.0			11725.0			11750.0			11775.0			11800.0			11825.0			11850.0			11875.0			11900.0			11925.0			11950.0			11975.0			12000.0			12025.0			12050.0			12075.0			12100.0			12125.0			12150.0			12175.0			12200.0			12225.0			12250.0			12275.0			12300.0			12325.0			12350.0			12375.0			12400.0			12425.0			12450.0			12475.0			12500.0			12525.0			12550.0			12575.0			12600.0			12625.0			12650.0			12675.0			12700.0			12725.0			12750.0			12775.0			12800.0			12825.0			12850.0			12875.0			12900.0			12925.0			12950.0			12975.0			13000.0			13025.0			13050.0			13075.0			13100.0			13125.0			13150.0			13175.0			13200.0			13225.0			13250.0			13275.0			13300.0			13325.0			13350.0			13375.0			13400.0			13425.0			13450.0			13475.0			13500.0			13525.0			13550.0			13575.0			13600.0			13625.0			13650.0			13675.0			13700.0			13725.0			13750.0			13775.0			13800.0			13825.0			13850.0			13875.0			13900.0			13925.0			13950.0			13975.0			14000.0			14025.0			14050.0			14075.0			14100.0			14125.0			14150.0			14175.0			14200.0			14225.0			14250.0			14275.0			14300.0			14325.0			14350.0			14375.0			14400.0			14425.0			14450.0			14475.0			14500.0			14525.0			14550.0			14575.0			14600.0			14625.0			14650.0			14675.0			14700.0			14725.0			14750.0			14775.0			14800.0			14825.0			14850.0			14875.0			14900.0			14925.0			14950.0			14975.0			15000.0			15025.0			15050.0			15075.0			15100.0			15125.0			15150.0			15175.0			15200.0			15225.0			15250.0			15275.0			15300.0			15325.0			15350.0			15375.0			15400.0			15425.0			15450.0			15475.0			15500.0			15525.0			15550.0			15575.0			15600.0			15625.0			15650.0			15675.0			15700.0			15725.0			15750.0			15775.0			15800.0			15825.0			15850.0			15875.0			15900.0			15925.0			15950.0			15975.0			16000.0			16025.0			16050.0			16075.0			16100.0			16125.0			16150.0			16175.0			16200.0			16225.0			16250.0			16275.0			16300.0			16325.0			16350.0			16375.0			16400.0			16425.0			16450.0			16475.0			16500.0			16525.0			16550.0			16575.0			16600.0			16625.0			16650.0			16675.0			16700.0			16725.0			16750.0			16775.0			16800.0			16825.0			16850.0			16875.0			16900.0			16925.0			16950.0			16975.0			17000.0			17025.0			17050.0			17075.0			17100.0			17125.0			17150.0			17175.0			17200.0			17225.0			17250.0			17275.0			17300.0			17325.0			17350.0			17375.0			17400.0			17425.0			17450.0			17475.0			17500.0			17525.0			17550.0			17575.0			17600.0			17625.0			17650.0			17675.0			17700.0			17725.0			17750.0			17775.0			17800.0			17825.0			17850.0			17875.0			17900.0			17925.0			17950.0			17975.0			18000.0			18025.0			18050.0			18075.0			18100.0			18125.0			18150.0			18175.0			18200.0			18225.0			18250.0			18275.0			18300.0			18325.0			18350.0			18375.0			18400.0			18425.0			18450.0			18475.0			18500.0			18525.0			18550.0			18575.0			18600.0			18625.0			18650		

Table 63. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Summer

No. OBSERVATIONS -- SURFACE = 751 Top = 495

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	5.0			15.0			ZONAL WIND SPEED (KNOTS)					
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 +150	90.0 +150	95.0 +250	97.5 +250	99.0
SFC	13	-10.0	-8.7	-6.3	-4.3	-2.8	-1.0	2.6	6.2	9.5	11.5	13.4	15.2
1000	394	-10.4	-8.7	-6.9	-5.0	-3.6	-1.9	1.5	4.0	6.6	8.0	9.9	13.4
950	1841	-12.6	-10.9	-9.1	-7.2	-5.8	-4.1	-0.7	2.7	4.4	5.8	7.7	9.5
900	3356	-15.5	-13.2	-10.7	-8.2	-6.2	-3.9	-0.4	5.5	7.8	9.8	12.3	14.2
850	4974	-13.7	-11.4	-8.9	-6.4	-4.5	-2.2	2.4	7.0	9.3	11.2	13.7	16.2
800	6677	-13.8	-11.4	-8.7	-6.1	-4.0	-1.6	3.4	6.4	10.6	12.9	15.5	18.2
750	8474	-16.4	-13.5	-10.3	-7.2	-4.7	-1.8	4.1	10.0	12.9	15.4	18.5	21.7
700	10367	-19.6	-16.2	-12.5	-9.8	-5.9	-2.5	4.4	11.3	14.7	17.5	21.3	25.0
650	12579	-21.7	-17.9	-13.8	-9.7	-6.5	-2.7	4.9	12.5	16.3	19.5	23.6	27.7
600	14511	-23.9	-19.7	-15.1	-10.6	-7.0	-2.8	5.7	14.2	18.4	22.0	35.5	31.1
550	16791	-25.3	-20.7	-15.7	-10.8	-6.9	-2.3	6.9	16.1	20.7	24.6	29.5	39.1
500	19249	-27.2	-22.2	-16.7	-11.3	-7.0	-2.0	8.2	18.4	23.4	27.7	33.1	36.6
450	22949	-23.4	-17.4	-11.3	-6.6	-1.1	1.0	21.5	27.0	31.7	37.8	43.8	49.3
400	24816	-29.7	-23.7	-17.2	-10.7	-5.6	-4.4	12.5	24.6	30.6	35.7	42.2	48.7
350	28002	-29.9	-23.6	-16.7	-9.8	-4.4	1.9	14.8	27.7	34.0	39.4	46.3	54.7
300	31548	-30.7	-23.8	-16.3	-8.8	-3.0	3.9	17.8	31.7	38.6	44.4	51.9	59.4
250	35666	-30.8	-23.4	-15.4	-7.3	-1.1	6.3	26.1	36.1	43.5	49.7	57.8	73.2
200	40463	-22.7	-22.2	-14.0	-5.9	-1.5	6.3	21.2	23.2	18.4	45.3	52.3	68.6
175	43245	-25.4	-18.5	-11.0	-3.5	2.3	9.2	23.1	37.0	43.9	49.7	57.2	71.6
150	46388	-21.7	-15.8	-9.6	-2.9	2.1	8.0	20.0	32.0	37.9	42.9	49.4	55.8
125	50039	-22.0	-17.0	-11.5	-6.6	-1.7	3.5	13.6	23.9	28.9	33.2	34.7	49.2
100	54469	-23.3	-19.5	-15.4	-11.2	-8.0	-4.2	3.5	11.2	15.0	18.2	22.4	30.3
80	58930	-22.9	-22.1	-19.0	-15.9	-10.7	-4.9	9.9	3.7	6.1	9.2	12.3	15.1
70	61671	-26.6	-24.1	-21.4	-18.6	-16.5	-14.0	-8.0	-3.8	-1.3	3.6	6.3	8.4

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 44. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California Summer
 NO. OBSERVATIONS == SURFACE == 751. TDP == 495

PRESSURE LEVEL (inHg)	MEAN HEIGHT (ft)	MERIDIONAL WIND SPEED (KNOTS)									
		5.0			15.87			50.0			90.0
		-250	-150	-50	-25.0	-15	-5	.150	.13	.10	.05
SFC	13	-9.3	-7.9	-6.4	-4.9	-3.7	-2.3	.5	3.1	6.7	5.9
1000	394	-7.4	-6.4	-5.3	-4.0	-3.0	-1.8	.4	3.0	6.2	5.5
920	1841	-7.3	-6.1	-4.8	-3.5	-2.5	-1.3	1.1	3.5	6.7	5.7
900	3356	-9.4	-8.0	-6.5	-5.0	-3.9	-2.5	.7	2.9	4.3	5.4
850	4974	-12.0	-10.4	-9.6	-8.8	-7.4	-5.4	-3.8	-0.4	2.9	6.0
800	6677	-15.9	-13.6	-11.1	-8.6	-6.7	-4.4	-2.7	4.8	7.0	7.8
750	8474	-16.1	-15.3	-12.2	-9.1	-6.7	-3.9	1.9	7.7	12.9	10.9
700	10367	-17.7	-14.7	-11.5	-8.2	-5.7	-2.7	3.7	9.3	12.3	9.5
650	12379	-18.6	-15.6	-12.1	-8.5	-5.8	-2.6	4.0	10.6	13.6	10.3
600	14511	-20.9	-17.3	-13.4	-9.5	-6.5	-3.9	4.3	11.5	15.1	11.3
550	16791	-22.5	-18.7	-16.5	-10.3	-7.1	-3.3	4.5	12.3	16.1	11.5
500	19249	-25.0	-20.8	-16.2	-11.7	-8.1	-3.9	4.6	13.1	17.3	14.0
450	21916	-27.0	-23.1	-17.9	-12.8	-8.8	-4.1	5.4	14.9	19.6	16.0
400	24816	-31.1	-25.9	-20.2	-14.5	-10.0	-4.8	5.9	16.6	21.8	18.1
350	28002	-34.9	-22.3	-15.7	-10.6	-6.6	-4.7	7.7	20.0	26.0	20.1
300	31598	-37.2	-30.5	-23.2	-15.9	-10.2	-5.5	10.1	23.7	30.4	23.6
250	35666	-37.8	-30.5	-22.5	-14.5	-8.3	-4.3	13.9	26.1	42.3	31.5
200	40463	-39.2	-29.5	-21.7	-12.7	-6.2	-1.5	17.1	32.7	46.4	36.0
175	43245	-36.8	-27.4	-19.3	-11.3	-5.0	-2.4	17.4	32.4	46.1	34.1
150	46388	-28.1	-22.0	-15.3	-8.6	-3.4	-2.7	15.2	27.7	45.7	38.5
125	50039	-20.3	-15.9	-11.1	-6.4	-2.7	-1.7	10.5	19.3	32.1	27.3
100	54469	-16.1	-13.6	-9.7	-6.3	-3.7	-0.6	5.6	11.8	17.5	20.9
80	58930	-12.2	-10.0	-7.6	-5.1	-3.2	-1.0	3.6	8.2	12.3	17.2
70	61611	-11.9	-9.9	-7.7	-5.5	-3.8	-0.8	2.3	6.4	10.1	14.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 85. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: Autumn

NO. OBSERVATIONS == SURFACE == 7840, TOP == 543

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	SURFACE					SCALAR WIND SPEED (KNOTS)							
		1.0 -250	2.0R -250	5.0	10.0 -150	15.0, 87	25.0	50.0 MEAN	75.0	84.13 +150	90.0	95.0 +250	97.73	99.0
SFC	13	0	0	0	0	1.5	3.3	7.0	10.7	12.5	14.0	16.0	18.0	19.6
1000	423	0	0	0	0	4	2.5	6.8	11.1	13.2	15.0	17.3	19.6	21.7
950	1870	0	0	0	0	2	2.8	8.1	13.4	16.0	18.2	21.1	23.9	26.5
900	3343	0	0	0	0	1.2	3.6	8.6	13.6	16.0	18.1	20.7	23.4	25.6
850	4977	0	0	0	0	1.5	3.4	5.6	10.2	14.8	17.0	18.9	21.4	23.8
800	6654	0	0	0	0	1.7	3.2	5.2	7.5	12.3	17.1	19.4	21.4	23.9
750	8425	0	0	1.0	3.9	6.2	8.9	14.4	19.9	22.6	24.9	27.8	30.8	33.5
700	10285	0	0	0.8	4.2	6.8	9.9	16.1	22.3	25.4	28.0	31.4	34.7	37.8
650	12267	0	0	0.8	4.6	7.6	11.1	18.2	25.3	28.8	31.8	35.6	39.4	42.9
600	14377	0	0	0.2	4.5	7.9	11.9	20.0	26.0	32.1	35.5	39.8	44.2	48.2
550	16627	0	0	0.1	5.0	8.8	13.3	22.4	31.5	36.0	39.8	44.7	49.6	54.1
500	19052	0	0	0.6	6.0	10.1	15.0	24.9	34.8	39.7	43.8	49.2	54.5	59.4
450	21683	0	0	0.8	6.7	11.3	16.7	27.7	44.1	48.7	54.6	60.5	65.9	70.7
400	24544	0	0	1.0	7.6	12.8	18.9	31.3	43.7	49.8	55.0	61.6	68.3	74.4
350	27684	0	0	1.9	9.3	15.0	21.8	35.5	49.2	56.0	61.7	69.1	76.5	83.3
300	31214	0	0	2.9	11.2	17.7	25.4	40.9	56.4	64.1	70.6	73.9	87.3	95.0
250	35240	0	0	3.7	12.7	19.7	28.0	44.7	61.5	69.7	76.7	85.7	94.7	102.9
200	39997	0	0	4.0	13.1	20.2	28.5	45.5	62.5	70.8	77.9	87.0	96.1	104.4
175	42772	0	0	4.6	13.1	19.7	27.5	43.3	59.1	66.9	73.5	82.0	90.5	98.3
150	45915	0	0	4.1	11.6	17.7	24.7	38.9	53.1	60.1	66.0	73.7	81.3	88.3
125	49583	0	0	3.7	10.0	14.8	20.5	32.1	43.7	49.4	54.2	60.5	66.7	72.4
100	54069	0	0	4.6	13.1	22.1	31.1	35.6	39.4	44.2	49.1	53.6	58.1	63.6
80	58442	0	0	2.5	5.2	8.4	14.8	21.2	24.4	27.1	30.5	37.2	40.1	44.4
70	61155	0	0	2.3	4.6	7.3	12.7	18.1	20.8	23.1	26.0	28.9	31.6	34.4

Table 66. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Autumn
NO. OBSERVATIONS -- SURFACE = 7840. TOP = 643

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	SURFACE					ZONAL WIND SPEED (MPHS)					99.0			
		1.0	2.2A	5.0	10.0	15.0	-15.0	25.0	50.0	75.0	84.13	90.0	95.0	97.73	+250
SFC	13	-14.9	-12.0	-10.5	-8.2	-6.4	-4.3	0	4.3	8.2	10.5	12.8	14.9		
1000	423	-16.7	-14.5	-12.1	-9.6	-7.7	-5.5	-0.9	3.7	5.9	7.8	10.3	12.7		
950	1870	-22.7	-14.9	-13.9	-11.5	-8.7	-6.7	-3.1	2.5	5.3	7.7	10.7	13.7		
900	3323	-23.2	-20.4	-17.3	-14.2	-11.4	-9.0	-3.7	2.6	5.4	7.6	10.9	14.0		
850	6977	-23.9	-20.9	-17.4	-14.0	-11.3	-9.2	-6.2	4.6	7.7	10.4	13.9	17.2		
800	6654	-24.6	-21.0	-17.3	-13.5	-10.6	-7.1	-0.1	6.9	10.4	13.3	17.1	20.9		
750	8475	-25.9	-22.0	-17.8	-13.5	-10.2	-6.3	-1.6	9.5	13.4	16.7	21.0	25.2		
700	10285	-26.9	-22.6	-17.9	-13.2	-9.6	-5.3	3.4	12.1	16.4	20.0	24.7	29.4		
650	12267	-29.1	-24.2	-18.9	-13.6	-9.5	-5.6	5.2	15.0	19.9	24.0	29.3	34.6		
600	14377	-29.5	-24.1	-18.6	-12.9	-8.5	-4.3	7.3	17.9	23.1	27.5	33.2	38.9		
550	16627	-31.9	-26.9	-19.6	-13.3	-9.3	-5.3	-2.5	9.6	21.3	32.1	38.4	44.8		
500	19052	-33.7	-27.3	-20.4	-13.4	-9.0	-5.0	-1.6	11.0	24.5	30.6	43.0	49.9		
450	21693	-34.7	-27.9	-20.4	-13.0	-8.2	-4.2	-0.4	13.5	27.6	34.2	40.0	47.4		
400	24544	-37.2	-29.6	-21.4	-13.1	-8.7	-4.9	1.6	11.5	21.5	39.1	45.5	53.8		
350	27644	-40.0	-31.6	-22.5	-13.3	-8.2	-4.2	2.2	19.2	30.2	44.6	51.7	60.9		
300	31214	-44.4	-34.8	-24.4	-13.9	-8.5	-3.8	23.2	42.6	52.2	60.3	70.8	81.2		
250	35240	-42.8	-32.8	-21.9	-11.0	-7.5	-2.5	7.5	27.8	48.1	58.1	66.6	77.5		
200	39997	-37.2	-27.5	-16.9	-6.3	-1.9	11.6	31.3	41.0	60.7	66.9	76.5	90.1		
175	42772	-31.4	-22.5	-12.8	-3.1	4.5	13.4	31.5	49.6	58.5	66.1	75.8	85.5		
150	45915	-27.0	-16.0	-10.3	-1.6	5.2	13.2	29.6	45.6	53.6	60.4	69.1	77.8		
125	49583	-21.9	-15.4	-8.3	-1.1	4.4	10.9	24.7	37.5	44.0	49.5	56.7	63.8		
100	54599	-21.4	-16.0	-10.3	-4.7	-0.3	4.9	15.2	31.1	31.1	35.5	41.1	46.8		
80	58442	-20.9	-16.4	-12.3	-7.9	-4.4	-0.3	8.0	16.3	20.4	23.9	28.3	32.8		
70	61115	-23.2	-19.3	-15.1	-10.8	-7.5	-3.6	4.3	12.2	16.1	19.4	23.7	27.9		

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 67. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: Autumn

NO. OBSERVATIONS -- SURFACE = 7840 TOP = 543

PRESSURE LEVEL (MBRS)	MEAN HEIGHT (FT)	NO. OF OBSERVATIONS				MERIDIONAL SPEED (KNOTS)				MEAN 0.150 0.250	MEAN 0.750 0.900 0.950 0.9750 0.990
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0		
SFC	13	-15.6	-13.6	-11.4	-9.3	-7.6	-5.6	-3.6	2.4	6.1	10.4
1000	423	-15.9	-13.9	-11.7	-9.5	-7.8	-5.8	-3.7	2.4	6.1	10.5
950	1870	-17.2	-15.0	-12.6	-10.2	-8.3	-6.1	-3.6	2.4	6.1	10.5
900	3383	-16.3	-14.2	-11.9	-9.6	-7.8	-5.7	-3.7	2.9	5.1	7.0
850	4977	-17.7	-15.1	-12.7	-10.0	-8.0	-5.6	-3.7	2.9	5.0	6.8
800	6654	-22.6	-19.5	-16.1	-12.7	-10.0	-6.9	-0.5	4.2	6.6	8.6
750	8425	-26.8	-23.0	-18.9	-14.8	-11.5	-7.7	-0.0	5.9	9.0	11.3
700	10245	-30.5	-26.2	-21.6	-16.9	-13.3	-9.0	-0.4	8.2	12.5	15.1
650	12267	-33.5	-28.2	-23.7	-18.6	-14.6	-9.9	-0.4	9.1	12.1	16.1
600	14377	-36.2	-31.1	-25.5	-19.9	-15.6	-10.5	-0.1	10.3	13.8	17.9
550	16627	-37.6	-34.0	-27.9	-21.8	-17.1	-11.5	-0.2	11.1	15.4	19.7
500	19052	-43.0	-36.9	-30.3	-23.7	-18.5	-12.4	-0.1	12.2	16.7	21.4
450	21683	-47.8	-41.0	-33.6	-26.2	-20.4	-13.6	-0.2	14.0	18.3	23.5
400	24544	-51.7	-46.0	-37.6	-29.3	-22.8	-15.8	-0.4	15.9	23.6	30.1
350	27694	-59.0	-50.5	-41.2	-31.9	-24.7	-16.2	-1.1	18.4	26.9	32.9
300	31214	-65.6	-56.1	-45.7	-35.4	-27.3	-17.8	-1.5	20.8	30.3	36.0
250	35240	-67.2	-59.1	-48.1	-37.1	-28.6	-18.5	-1.9	22.3	32.4	39.6
200	39997	-65.7	-56.0	-45.5	-34.9	-26.7	-17.0	-2.6	22.2	31.9	40.9
175	42772	-68.2	-51.3	-41.6	-31.9	-24.3	-15.4	-2.7	20.8	37.3	50.7
150	45915	-69.6	-42.2	-34.1	-26.0	-19.7	-12.3	-2.8	17.9	31.6	47.0
125	49583	-42.4	-36.2	-29.4	-22.6	-17.3	-11.1	-1.6	14.3	20.5	35.6
100	54069	-32.0	-27.5	-22.6	-17.6	-13.4	-9.3	-0.1	9.1	13.6	17.4
80	58442	-22.0	-19.8	-16.3	-12.9	-10.2	-7.0	-0.6	5.8	9.0	11.7
70	61115	-20.9	-18.2	-15.2	-12.2	-9.9	-7.2	-1.4	4.0	6.7	12.0

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 68. Cumulative Frequency Distribution of Upper Winds (Scalap) at Standard Pressure Levels for Point Mugu, California: January
 NO. OBSERVATIONS -- SURFACE = 246, TOP = 173

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	SCALAP WIND SPEED (KNOTS)					MEAN	A=13 +1SD	90.0	95.0	97.73 +2SD	99.0
		1.0 -250	2.2R -250	5.0 -150	10.0 -150	15.97 -150						
SFC	13	0	0	0	.5	2.4	9.1	13.6	15.8	17.7	20.1	22.5
1000	511	0	0	0	0	1.6	3.7	9.9	16.1	19.2	21.8	24.7
950	1942	0	0	0	0	1.6	4.7	10.9	17.1	20.2	22.8	26.5
900	3412	0	0	0	0	2.0	5.0	11.0	17.0	20.0	22.5	29.5
850	4941	0	0	0	0	2.8	4.7	7.0	11.6	16.2	18.5	22.9
800	6545	0	0	0	0	3.7	5.9	8.6	14.1	19.6	22.3	27.7
750	8210	0	0	0	1.8	5.2	7.9	11.1	17.5	23.9	24.6	30.5
700	10118	0	0	3.3	7.1	10.1	13.6	20.7	27.8	31.3	34.3	38.1
650	12047	0	0	3.4	7.9	11.4	15.5	23.9	32.3	36.4	39.9	44.4
600	14101	0	0	4.0	9.0	12.9	17.5	26.4	36.1	40.7	44.6	49.6
550	16306	0	0	5.6	11.0	16.3	20.3	30.5	40.7	45.7	50.0	55.4
500	18668	0	0	6.1	7.0	13.0	17.6	23.0	34.1	45.2	50.6	55.2
450	21234	0	0	1.7	8.2	14.7	16.7	25.6	37.7	49.8	55.7	61.2
400	24019	0	0	8.3	15.7	21.5	28.3	42.2	56.1	62.9	68.7	76.1
350	27116	0	0	2.7	10.6	18.5	24.7	32.0	46.7	61.4	68.7	82.4
300	30554	0	0	13.3	4.9	21.6	26.1	35.8	51.3	66.8	74.5	81.0
250	34472	0	0	4.7	14.1	23.4	30.7	39.3	56.7	74.1	82.7	90.3
200	39111	0	0	11.7	1.7	21.3	29.2	38.5	57.4	76.3	93.5	103.6
175	41870	0	0	5.9	14.5	20.7	26.9	37.7	53.7	69.7	77.6	84.3
150	45036	0	0	5.1	13.0	17.1	27.0	34.2	48.9	63.6	70.8	84.8
125	48773	0	0	5.4	12.0	18.6	23.9	29.9	42.2	54.5	60.6	65.8
100	53284	0	0	4.3	19.3	14.3	14.2	22.8	32.1	41.4	46.0	49.9
80	57762	0	0	2.7	6.3	10.0	12.4	16.1	22.9	29.7	33.0	39.5
70	60443	0	0	3.3	6.9	9.6	12.6	19.4	26.0	29.2	31.9	39.0

Table 69. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: January

NO. OBSERVATIONS -- SURFACE = 2466 Freq. = 173

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	2.28			5.0			10.0			15.87			25.0			ZONAL WIND SPEED (KNOTS)		
		-250	1.0	-150	-150	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	
SFC	13	-18.5	-16.2	-13.7	-11.2	-9.2	-6.9	-2.2	2.5	4.8	6.8	9.3	11.8	14.1	16.1	18.1	20.1	22.1	
1000	571	-23.7	-20.9	-17.8	-14.8	-12.7	-9.6	-3.9	1.8	4.6	7.0	10.0	13.1	15.9	18.1	20.1	21.1	22.1	
950	1942	-29.4	-25.8	-21.9	-18.0	-15.0	-11.4	-4.2	3.0	6.6	9.6	13.5	17.4	20.4	24.1	27.1	29.1	31.1	
900	3412	-27.7	-24.0	-20.0	-16.0	-12.9	-9.2	-1.8	5.6	9.3	12.4	16.4	20.4	24.1	28.1	31.1	34.1	37.1	
850	4961	-23.9	-20.4	-16.6	-12.8	-9.9	-6.4	-0.6	7.6	11.1	14.0	17.8	21.6	25.1	28.1	31.1	34.1	37.1	
800	6585	-23.6	-19.8	-15.6	-11.4	-8.2	-4.4	-3.4	11.2	15.0	18.2	22.3	26.0	29.1	32.8	36.4	39.1	42.1	
750	8310	-24.1	-19.7	-14.9	-10.1	-6.4	-2.0	-6.9	15.8	20.2	23.9	28.7	33.5	37.9	41.4	45.0	48.6	52.1	
700	10118	-23.8	-19.0	-13.8	-8.6	-4.5	-0.3	0.0	19.7	24.5	28.6	33.8	39.0	43.4	47.0	50.6	54.2	57.8	
650	12047	-25.8	-20.4	-14.5	-8.5	-3.9	1.5	12.6	23.7	29.1	33.7	39.7	45.6	51.0	56.4	61.0	66.4	71.1	
600	14101	-27.4	-21.5	-15.1	-8.6	-3.6	2.3	14.3	26.3	32.2	37.2	43.7	50.1	56.1	61.0	66.4	71.1	76.8	
550	16396	-29.3	-22.7	-15.5	-8.4	-2.8	3.8	17.1	30.4	37.6	42.6	49.7	56.9	63.5	69.1	75.7	82.3	89.8	
500	18668	-31.7	-24.4	-16.4	-8.4	-2.2	5.1	20.0	34.9	42.2	48.4	56.4	64.4	71.7	78.7	85.7	92.7	99.7	
450	21234	-36.0	-27.8	-18.9	-10.0	-3.1	5.1	21.4	38.1	46.3	53.2	62.1	70.1	79.2	88.0	97.0	106.0	115.0	
400	24019	-38.6	-29.6	-19.7	-9.9	-2.2	6.8	25.2	43.6	52.6	60.3	69.0	78.1	89.1	99.2	109.2	119.2	129.2	
350	27116	-43.0	-32.9	-21.9	-10.9	-2.4	7.7	28.1	48.5	58.6	67.1	78.1	89.1	95.5	105.5	115.5	125.5	135.5	
300	30554	-44.4	-33.7	-22.1	-10.4	-1.4	9.3	10.9	52.5	63.2	72.2	83.9	95.5	105.5	115.5	125.5	135.5	145.5	
250	34412	-42.4	-31.2	-19.0	-6.8	-2.7	13.9	36.6	59.3	70.5	80.0	92.2	104.4	115.6	125.6	135.6	145.6	155.6	
200	39111	-31.4	-20.9	-9.5	1.9	10.8	21.3	42.5	63.7	74.2	83.1	94.5	105.9	116.4	126.4	136.4	146.4	156.4	
175	41870	-23.2	-13.9	-3.8	6.3	14.2	23.5	42.3	61.1	70.4	78.3	88.4	98.5	107.8	117.8	127.8	137.8	147.8	
150	45016	-17.5	-9.4	-0.6	8.2	15.0	23.1	39.4	55.7	63.8	70.6	79.4	88.2	96.3	105.3	114.4	124.4	134.4	
125	48773	-12.6	-5.9	1.4	8.8	14.5	21.2	34.9	48.6	55.3	61.6	68.4	75.7	84.4	93.4	102.4	111.4	121.4	
100	53224	-12.2	-6.1	-0.9	5.1	9.7	15.1	26.2	37.3	42.7	47.3	53.3	59.2	64.6	70.0	76.4	82.4	88.4	
80	57762	-15.6	-11.0	-6.0	-0.9	3.0	7.6	26.4	37.0	40.0	46.0	51.0	56.0	61.0	66.0	71.0	76.0	81.0	
70	60433	-19.8	-15.1	-10.0	-4.9	-1.0	3.7	13.1	22.5	27.2	31.1	36.2	41.3	46.0	51.0	56.0	61.0	66.0	

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 70. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: January
 NO. OBSERVATIONS -- SURFACE = 2460, TOP = 173

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (INCHES)						MEAN	.150	.133	.125	.113	.106	.100	.090
		1.0	2.2A	5.0	10.0	15.0†	25.0								
SFC	13	-21.7	-19.2	-16.5	-11.6	-9.2	-4.2	0.0	3.3	5.4	6.1	10.6	13.3		
1000	531	-22.4	-19.8	-17.0	-14.2	-12.0	-9.4	-4.2	1.0	3.6	5.8	8.6	11.4	14.0	
950	1942	-21.6	-19.1	-16.3	-13.6	-11.4	-8.9	-3.7	1.5	4.0	6.2	8.9	11.7	14.2	
900	3412	-22.3	-19.4	-16.6	-13.7	-11.4	-9.7	-3.2	2.3	5.0	7.3	10.2	13.2	15.9	
850	4961	-21.2	-18.6	-15.7	-12.8	-10.6	-8.0	-2.6	2.6	5.4	7.6	10.5	13.4	16.0	
800	6595	-22.7	-20.3	-16.0	-13.9	-10.5	-7.5	-3.5	3.5	6.9	9.6	13.6	17.3	20.7	
750	8310	-23.6	-29.4	-25.2	-20.8	-17.4	-14.4	-7.2	3.0	5.2	7.9	10.4	14.8	19.2	
700	12116	-38.6	-16.1	-29.0	-23.9	-26.0	-15.3	-5.9	3.5	6.2	12.1	17.2	22.3	27.2	
650	12047	-43.8	-38.6	-32.9	-27.2	-22.7	-17.5	-6.8	3.9	9.1	13.6	19.3	25.0	30.2	
600	16101	-50.1	-44.2	-37.7	-31.2	-26.2	-20.3	-8.2	3.9	9.4	14.8	21.3	27.8	33.7	
550	16316	-55.5	-49.0	-41.9	-34.9	-29.4	-22.9	-9.8	3.3	9.6	15.3	22.3	29.4	35.9	
500	18648	-59.2	-52.2	-44.6	-36.9	-31.0	-26.9	-9.4	4.9	11.4	17.3	25.0	32.6	39.6	
450	21234	-65.4	-57.4	-49.5	-41.2	-34.9	-27.2	-11.2	5.6	11.2	17.6	25.9	34.2	41.4	
400	26019	-72.5	-64.1	-54.9	-45.7	-38.6	-30.2	-13.1	4.0	12.4	19.5	26.7	37.9	46.3	
350	27116	-77.9	-68.7	-58.1	-48.7	-40.9	-31.7	-13.1	5.5	14.7	22.5	32.5	42.5	51.7	
300	30554	-87.0	-76.9	-65.9	-54.4	-46.4	-39.3	-15.9	4.5	14.6	23.1	34.1	45.1	55.2	
250	34472	-94.5	-83.4	-71.8	-59.9	-50.7	-39.3	-17.8	4.2	15.1	24.3	36.2	46.0	56.9	
200	39111	-90.7	-80.1	-68.5	-57.0	-48.0	-37.4	-15.0	5.6	16.2	25.2	36.7	46.3	56.9	
175	41870	-75.1	-66.3	-56.7	-47.0	-39.5	-30.7	-12.7	5.3	14.1	21.4	31.3	40.9	49.7	
150	45036	-69.3	-60.2	-51.3	-42.5	-35.6	-27.5	-11.6	5.5	13.6	20.5	29.3	38.2	46.3	
125	48773	-55.9	-49.3	-42.1	-34.9	-29.3	-22.7	-9.3	4.1	10.7	16.3	23.5	30.7	37.1	
100	51224	-41.5	-36.6	-31.2	-25.6	-21.6	-16.6	-6.6	3.4	8.4	12.4	23.4	28.4	34.4	
80	51762	-30.1	-26.6	-22.8	-19.0	-16.1	-12.5	-5.4	1.7	5.2	8.2	12.0	15.8	19.3	
70	60443	-25.9	-22.8	-19.5	-16.1	-13.5	-10.4	-4.2	2.0	5.1	7.7	11.1	14.4	17.5	

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 71. Cumulative Frequency Distribution of Upper Wind (Scalar) at Standard Pressure Levels for Point Mugu, California: February

NO. OBSERVATIONS -- SURFACE = 210, TOP = 143

PRESSURE LEVEL (MASL)	SCALAR WIND SPEED (KNOTS)						MEAN +1SD	MEAN -1SD
	1.0	2.0	5.0	10.0	15.0	25.0		
SFC	1.3	0	0	0	1.7	4.0	6.6	1.7
1000	511	0	0	0	1.1	3.7	9.1	14.5
950	1919	0	0	0	1.1	4.2	10.5	16.8
900	3422	0	0	0	2.4	5.0	10.2	15.6
850	4970	0	0	0	1.3	3.3	5.6	10.4
650	6601	0	0	0	3.3	5.9	6.1	13.4
700	8323	0	0	0	1.1	4.9	7.8	11.2
750	10141	0	0	0	1.0	5.7	9.3	13.6
650	12070	0	0	0	5.9	10.1	15.0	25.0
600	14127	0	0	0	1.2	6.3	11.1	16.7
550	16322	0	0	0	2.3	6.7	13.4	19.4
500	18694	0	0	0	3.1	9.9	15.2	21.4
450	21250	0	0	0	6.3	12.2	18.5	24.8
400	24039	0	0	0	1.1	8.3	15.5	21.5
350	27116	0	0	0	9.2	16.5	22.9	30.5
300	30554	0	0	0	1.3	10.6	19.9	27.1
250	34442	0	0	0	2.2	10.1	16.7	27.4
200	39111	0	0	0	6.2	13.5	21.5	29.5
175	41877	0	0	0	8.5	14.4	21.6	28.5
150	45046	0	0	0	10.3	15.9	22.9	29.1
125	48793	0	0	0	8.6	13.4	18.6	23.8
100	53304	0	0	0	8.0	11.4	16.0	20.2
80	57745	0	0	0	1.2	4.6	8.3	11.9
70	60446	0	0	0	1.1	4.3	7.6	10.1

Table 72. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California February
NO. OBSERVATIONS == SURFACE == 210. TOP == 165.

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)					MEAN	A6.13	90.0	45.0	97.73	99.0
		1.0	2.5H	5.0	10.0	15.0						
SFC	13	-18.5	-16.1	-13.5	-10.6	-8.8	-6.0	-3.7	-0.7	3.4	5.0	7.0
1090	511	-22.3	-19.4	-16.6	-13.7	-11.4	-9.7	-7.2	-3.2	2.3	5.0	7.3
950	1939	-27.9	-24.4	-21.0	-17.4	-14.6	-11.3	-8.6	-6.6	2.1	5.4	8.2
800	3422	-24.9	-21.7	-18.3	-14.9	-12.3	-9.2	-6.9	-5.0	3.4	6.5	9.1
650	4910	-22.1	-19.0	-15.6	-12.2	-9.6	-7.5	-6.5	-5.7	6.1	9.2	11.6
500	6611	-20.5	-17.2	-13.6	-10.6	-7.7	-5.9	-4.9	-4.4	9.5	12.4	15.6
750	8123	-20.0	-16.3	-12.2	-8.2	-5.0	-1.3	-0.7	-0.7	13.3	17.9	20.8
700	10141	-21.0	-16.6	-11.8	-7.1	-3.4	-1.4	-1.4	-1.0	9.8	18.6	23.0
650	12610	-20.6	-5.9	-10.8	-5.1	-1.7	-0.4	-0.4	-0.4	22.0	26.7	35.7
550	14127	-14.4	-16.2	-10.5	-4.8	-0.4	4.8	1.4	1.4	26.0	31.2	35.6
500	16332	-18.5	-12.3	-7.6	-2.0	-2.4	7.6	16.1	16.1	28.6	34.2	43.8
450	18644	-20.9	-15.5	-9.5	-2.0	-3.0	8.9	25.0	25.0	33.1	39.0	44.0
400	21250	-21.8	-15.4	-8.4	-1.4	4.1	10.5	22.6	16.7	43.1	50.5	57.0
350	26913	-22.1	-15.3	-7.9	-0.5	5.3	12.1	25.9	19.7	46.5	52.3	59.7
300	27116	-24.1	-16.4	-8.0	-0.4	6.9	14.0	10.2	10.2	53.5	60.0	68.4
250	30354	-29.4	-20.1	-9.9	-2.7	8.2	17.5	16.5	16.5	64.8	72.7	82.9
200	34442	-26.7	-16.9	-6.2	-4.6	12.9	22.7	42.7	42.7	72.5	80.8	91.6
175	39111	-13.1	-4.5	4.9	1.2	1.1	30.1	47.5	44.9	73.5	80.8	90.1
150	41877	-5.8	1.3	9.1	16.2	12.9	30.0	44.5	44.5	59.0	66.1	72.1
125	45046	-4.2	2.4	9.6	16.8	22.4	29.0	42.4	42.4	55.8	62.4	68.0
100	48873	-3.3	2.4	8.6	14.3	19.7	25.4	17.1	17.1	48.6	54.3	59.1
80	53314	-5.7	-0.7	4.8	10.2	4.5	19.5	29.7	29.7	44.9	49.2	54.6
70	57795	-9.2	-5.0	-0.5	4.1	7.6	11.4	20.2	20.2	32.8	40.9	45.4
	60446	-12.6	-8.8	-4.7	-2.4	2.7	6.5	14.2	14.2	21.9	25.7	31.0

NOTE == POSITIVE COMPONENT IS FLOW FROM THE WEST.

Table 73. Cumulative Frequency Distribution of the Monthly Upper Wind Component at Standard Pressure Levels for Point Mugu, California: February

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERRIDIONAL WIND SPEED (KNOTS)									
		1.0 2.28 -2.50	5.0 10.0 -15.0	15.87 25.0 -30.0	25.0 MEAN -30.0	75.0 MEAN -45.0	84.3 +15D	90.0 -15D	95.0 +15D	97.3 -25D	99.0 +25D
SFC	13	-20.5	-18.1	-15.5	-12.9	-10.9	-8.5	-3.7	1.1	3.5	5.5
1000	531	-21.0	-16.5	-16.0	-13.3	-11.3	-8.9	-4.0	-3.3	3.3	5.3
950	1939	-22.4	-19.4	-17.0	-14.1	-11.9	-9.3	-4.0	-3.3	3.9	6.1
900	3422	-21.2	-18.7	-15.9	-13.2	-11.0	-8.5	-3.7	1.9	4.4	6.6
850	4970	-21.2	-18.5	-15.5	-12.7	-10.4	-7.7	-3.1	3.1	5.8	8.0
800	6661	-29.4	-25.7	-21.1	-17.6	-14.4	-10.7	-3.1	4.5	8.2	11.4
750	8323	-39.7	-34.6	-29.0	-27.4	-19.1	-14.0	-3.6	6.8	11.9	16.2
700	10141	-50.5	-44.3	-37.6	-30.8	-25.6	-19.4	-6.9	5.6	11.8	16.2
650	12076	-55.9	-49.1	-41.7	-34.3	-28.6	-21.9	-8.1	5.6	11.8	16.2
600	14127	-62.0	-54.4	-46.1	-37.6	-31.3	-23.7	-8.2	7.3	12.4	18.1
550	16122	-67.4	-59.1	-50.0	-41.0	-33.9	-25.6	-8.7	7.3	14.9	21.4
500	18644	-69.2	-60.6	-51.2	-41.8	-34.5	-25.9	-8.4	6.2	16.5	23.6
450	21250	-73.1	-63.9	-53.9	-43.1	-36.1	-26.9	-8.3	6.1	17.7	25.0
400	24039	-79.9	-70.0	-59.2	-48.3	-39.9	-30.0	-9.8	6.3	19.5	27.3
350	27116	-88.0	-75.1	-63.3	-51.4	-42.2	-31.3	-10.4	2.3	20.3	28.7
300	30554	-90.7	-78.8	-65.8	-52.9	-42.4	-31.3	-9.3	12.7	23.6	32.8
250	34462	-87.2	-75.7	-63.2	-50.6	-40.9	-30.9	-6.8	17.3	29.2	39.3
200	39111	-75.1	-65.2	-54.5	-43.7	-35.4	-29.4	-6.1	17.2	24.2	32.5
175	41877	-74.1	-58.6	-49.1	-40.0	-32.4	-24.3	-7.6	10.3	18.8	26.0
150	45046	-60.0	-53.1	-44.6	-36.5	-30.1	-22.5	-7.1	8.3	15.9	22.3
125	48743	-46.9	-41.2	-34.9	-24.7	-23.8	-18.1	-6.4	5.3	11.0	15.9
100	53374	-39.8	-35.0	-29.8	-24.6	-20.6	-15.8	-6.2	3.4	8.2	12.2
80	57745	-36.2	-28.6	-24.6	-20.7	-17.6	-14.0	-6.6	4.4	7.5	11.4
70	60446	-26.4	-23.6	-20.5	-17.1	-15.0	-12.2	-6.4	2.2	4.6	7.7

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 74. Cumulative Frequency Distribution of Upper Winds (Scalair) at Standard Pressure Levels for Point Mugu, California: March
 NO. OBSERVATIONS -- SURFACE = 263, TOP = 178

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)												
		1.0 -2.0	2.0 -2.0	5.0 -1.0	10.0 -1.0	15.0 -1.0	20.0 -1.0	25.0 -1.0	50.0 MEAN	75.0 +1SD	90.0 +1SD	95.0 +1SD	97.5 +2SD	99.0 +2SD
SFC	13	0	0	0	0	1.6	3.7	7.0	12.1	14.2	16.0	18.2	20.5	22.6
1000	482	0	0	0	0	1.6	3.8	6.4	13.0	15.2	17.1	19.6	22.0	24.2
950	1833	0	0	0	0	0	3.5	8.1	14.1	16.7	16.9	21.9	24.6	27.2
900	3373	0	0	0	0	0	4.5	9.1	13.7	15.9	17.8	20.3	22.7	24.9
850	6925	0	0	0	0	2.5	4.4	6.6	11.2	15.4	18.0	19.9	22.4	24.8
800	6555	0	0	0	0	3.4	5.4	8.6	14.3	20.0	22.6	25.2	27.6	30.1
750	6278	0	0	0	0	3.7	6.8	10.4	17.7	25.0	28.6	31.7	35.6	39.0
700	10099	0	0	0	0	4.1	7.9	12.3	21.3	30.3	34.7	38.5	43.3	48.1
650	12018	0	0	0	0	4.9	9.1	14.1	24.2	34.3	39.3	43.5	49.0	54.4
600	14012	0	0	0	0	5.9	10.2	15.6	27.1	38.8	44.4	49.2	55.3	61.5
550	16246	0	0	0	0	9.7	14.2	19.5	30.2	40.9	46.2	50.7	56.4	67.5
500	18679	0	0	0	0	4.1	10.4	15.4	21.2	33.1	45.0	50.6	62.1	68.5
450	21191	0	0	0	0	5.7	12.6	19.0	24.3	31.2	40.1	56.4	61.8	74.3
400	23913	0	0	0	0	7.2	14.7	20.5	27.4	41.3	55.2	62.1	67.9	75.6
350	27041	0	0	0	0	9.9	16.9	23.1	30.4	45.3	60.2	67.5	73.7	82.9
300	30472	0	0	0	0	2.0	10.9	19.7	26.6	34.7	61.2	67.7	81.7	89.7
250	34993	0	0	0	0	1.6	11.5	21.4	29.1	38.2	66.6	75.6	91.5	100.4
200	39049	0	0	0	0	4.8	14.8	24.7	32.5	41.6	60.2	78.8	95.7	101.7
175	41604	0	0	0	0	6.0	16.7	25.5	32.3	40.3	66.6	72.9	80.9	87.7
150	44997	4.2	10.9	18.2	25.5	31.2	37.9	61.5	65.1	71.8	77.5	84.8	92.1	98.8
125	48440	4.5	10.1	16.3	22.4	27.2	32.8	44.3	55.8	61.1	66.2	72.3	78.5	86.1
100	52391	4.6	9.0	13.8	14.6	22.3	26.7	35.6	44.5	48.9	57.4	62.2	66.6	71.0
80	57804	4.2	3.8	7.7	11.6	14.7	18.3	25.6	32.9	36.5	43.5	47.4	51.0	57.0
70	60505	0	0	4.1	7.7	10.4	13.6	20.2	26.8	30.0	32.7	36.3	39.8	43.0

Table 75. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: March

NO. OBSERVATIONS -- SURFACE = 263. TOP = 178

PRESSURE LEVEL (INBS)	MEAN HEIGHT (FT)	SURFACE			ZONAL WIND SPEED (IN/SEC)			97.73			99.0		
		1.0	2.2A	5.0	10.0	15.87	25.0	50.0	75.0	84.13	90.0	95.0	100.0
SFC	13	-16.9	-14.4	-11.6	-8.9	-6.7	-4.2	1.0	6.2	8.7	10.9	13.6	16.4
.000	482	-19.9	-17.1	-14.0	-10.9	-8.5	-5.7	-0.1	5.9	8.7	11.1	14.2	17.3
950	1893	-23.1	-19.9	-16.4	-13.0	-10.3	-7.1	-0.7	5.7	8.9	11.6	15.0	18.5
900	3373	-20.5	-17.6	-14.4	-11.3	-8.8	-5.9	0	5.9	8.8	11.3	14.4	17.6
850	4925	-20.4	-17.3	-13.9	-10.5	-7.8	-4.7	1.7	8.1	11.2	13.9	17.3	20.1
800	6555	-20.9	-17.3	-13.4	-9.5	-6.5	-2.9	4.3	11.5	15.1	18.1	22.0	25.9
750	9278	-23.1	-18.8	-14.1	-9.4	-5.8	-1.5	7.2	15.9	20.2	23.8	28.5	33.2
700	10089	-24.2	-19.2	-13.8	-8.4	-4.2	0.8	0.6	20.9	25.6	30.0	35.4	37.5
650	12018	-26.2	-20.6	-14.5	-8.4	-3.7	1.9	13.2	24.5	30.1	34.8	40.8	45.8
600	14072	-26.9	-20.9	-14.3	-7.7	-2.6	3.4	15.7	28.0	34.0	39.1	45.7	52.3
550	16266	-28.0	-21.4	-14.2	-6.9	-1.3	5.3	8.8	32.3	38.9	44.5	51.8	58.3
500	18629	-30.1	-22.9	-15.0	-7.1	-1.0	6.2	20.9	35.6	42.8	48.9	56.8	64.7
450	21191	-35.0	-26.6	-17.7	-8.7	-1.7	6.5	23.3	40.0	46.3	55.3	64.3	73.3
400	23973	-36.8	-27.6	-18.0	-8.2	-0.6	6.4	26.6	44.8	53.8	61.4	71.2	81.0
350	27041	-34.6	-25.3	-15.1	-5.0	2.9	12.2	31.1	50.0	59.3	67.2	77.3	87.5
300	30472	-34.2	-24.2	-13.3	-2.3	6.2	16.6	57.0	67.0	75.5	86.5	97.4	107.4
250	34393	-28.1	-18.0	-6.9	4.1	12.7	22.8	43.4	64.0	74.1	82.7	93.7	104.8
200	39049	-15.3	-6.0	-4.2	14.3	22.2	31.5	50.4	69.3	78.4	86.5	96.6	106.8
175	41808	-21.2	-11.5	-0.9	9.7	17.9	27.6	47.3	67.0	76.7	84.9	95.5	106.1
150	44997	-4.9	2.3	10.1	18.0	24.1	31.3	45.9	60.5	67.7	73.8	81.7	89.5
125	48740	-3.4	2.7	9.4	16.1	21.3	27.4	39.9	52.4	59.5	63.7	70.4	77.1
100	53291	-0.0	4.6	9.6	14.7	18.6	23.2	42.0	46.6	50.5	55.6	60.6	65.2
80	57805	-3.2	-0.6	4.7	8.8	12.0	15.2	31.4	34.8	38.0	42.1	46.2	50.1
70	60505	-7.8	-4.2	-0.2	3.7	6.8	10.4	25.2	26.8	31.9	35.8	39.8	43.4

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 76. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: March

NO. OBSERVATIONS -- SURFACE = 263. TOP = 178

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)									
		2.2A			5.0			10.0			15.0
		MEAN	-250	+150	MEAN	-50	+50	MEAN	-75.0	+75.0	MEAN
SFC	1.5	-15.9	-13.8	-11.5	-9.2	-7.4	-5.3	-3.0	5.4	7.2	9.5
1000	4.8	-16.5	-14.4	-12.1	-9.8	-8.0	-5.9	-3.6	4.8	6.6	8.9
950	16.3	-17.5	-15.3	-12.9	-10.5	-8.6	-6.4	-4.0	4.8	6.7	9.1
900	33.7	-18.2	-15.9	-13.4	-10.9	-8.9	-6.6	-4.9	2.6	5.1	7.1
850	69.2	-22.4	-19.6	-16.5	-13.4	-11.0	-8.2	-6.4	3.4	6.2	8.6
800	65.5	-30.7	-26.6	-22.5	-18.4	-15.3	-11.6	-9.1	3.4	7.1	11.7
750	82.8	-36.6	-32.1	-27.2	-22.4	-18.6	-14.1	-11.1	3.9	7.4	14.3
700	100.9	-43.4	-38.1	-32.3	-26.5	-22.0	-16.7	-13.9	4.9	10.2	14.7
650	120.8	-47.7	-41.8	-35.3	-28.8	-23.8	-17.9	-15.6	6.3	12.2	17.2
600	140.2	-54.0	-47.3	-40.0	-32.6	-26.4	-20.2	-18.5	7.2	13.9	19.6
550	162.6	-51.1	-44.7	-37.8	-30.3	-25.4	-19.0	-16.1	6.8	13.2	18.6
500	186.9	-55.9	-48.6	-41.1	-33.3	-27.3	-20.2	-17.3	8.6	15.7	21.7
450	211.9	-60.9	-53.2	-44.8	-36.4	-29.4	-22.1	-18.4	9.3	17.0	23.6
400	239.7	-66.0	-57.5	-48.2	-39.0	-31.8	-23.3	-19.1	11.1	19.6	26.4
350	270.4	-70.0	-61.0	-51.2	-41.4	-33.8	-24.8	-20.6	11.6	20.6	28.2
300	304.7	-78.1	-68.1	-57.3	-46.4	-38.0	-28.1	-22.3	7.9	12.3	20.6
250	343.9	-84.3	-73.5	-61.8	-50.0	-40.9	-30.1	-24.3	13.3	24.3	33.4
200	390.9	-81.8	-71.5	-60.2	-49.0	-40.2	-29.9	-24.1	8.9	12.1	22.4
175	418.0	-65.5	-55.9	-47.5	-38.2	-30.9	-22.3	-16.4	12.5	21.1	37.7
150	449.9	-53.9	-46.4	-38.8	-31.6	-24.9	-17.7	-13.2	11.3	18.5	24.6
125	481.4	-44.0	-38.1	-31.7	-25.2	-20.2	-14.3	-10.4	9.7	15.6	20.6
100	53.2	-32.9	-28.4	-23.5	-18.7	-14.9	-10.4	-7.4	1.4	12.1	15.9
80	57.8	-23.6	-20.4	-16.9	-13.3	-10.6	-7.4	-4.6	9.0	11.7	18.8
70	60.5	-19.7	-17.1	-14.1	-11.1	-8.8	-6.1	-3.5	5.1	7.8	10.1

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 77. Cumulative Frequency Distribution of Upper Winds (Scales) at Standard Pressure Levels for Point Mugu, California: April

NO. OBSERVATIONS -- SURFACE = 282, TOP = 198

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)									
		1.0 -25.0	2.0 -25.0	5.0 -15.0	10.0 -15.0	15.0 -15.0	25.0 -15.0	50.0 MEAN	75.0 +150	90.0 A=13 +150	95.0 +150
SFC	13	0	0	0	1	1.6	3.4	7.1	10.8	12.6	16.1
1000	453	0	0	0	0	1.7	3.6	7.6	11.6	13.5	19.9
950	1870	0	0	0	0	1.6	3.7	8.1	12.5	14.6	19.4
900	3350	0	0	0	0	2.9	4.0	8.9	12.9	14.6	21.3
850	4908	0	0	0	0	2.7	4.5	6.6	11.0	15.4	23.2
800	6545	0	0	0	0	2.5	5.1	9.5	14.3	19.1	26.1
750	8278	0	0	0	0	2.9	6.2	6.7	11.7	17.7	28.7
700	10102	0	0	0	0	6.7	9.8	13.4	20.4	28.2	31.1
650	12034	0	0	0	0	10.5	15.1	24.3	31.8	38.8	38.7
600	14038	0	0	0	0	1.7	6.6	17.5	24.3	33.5	42.8
550	16102	0	0	0	0	2.3	7.9	12.3	17.5	28.0	42.0
500	18675	0	0	0	0	1.1	7.1	12.6	19.1	22.2	56.4
450	21243	0	0	0	0	1.5	9.0	14.8	21.7	35.6	62.2
400	24042	0	0	0	0	1.2	9.5	16.0	23.6	39.1	65.7
350	27096	0	0	0	0	3.3	12.2	19.1	27.3	43.6	66.7
300	30551	0	0	0	0	6.0	15.2	22.4	30.9	48.1	75.4
250	34495	0	0	0	0	3.7	18.0	25.3	33.8	45.3	73.8
200	39144	0	0	0	0	3.3	12.4	21.5	29.6	51.2	81.0
175	41960	2.0	0	0	0	7.3	15.5	23.8	30.2	37.8	64.3
150	45079	0	0	0	0	8.4	15.8	22.9	29.5	35.1	69.7
125	48737	3.4	0	0	0	6.3	13.3	20.3	25.9	32.2	61.7
100	53436	1.0	0	0	0	8.4	13.9	19.3	23.6	28.6	68.4
80	57955	0	1.3	0	0	5.1	14.0	19.0	21.6	29.9	42.3
70	60649	0	0	0	0	5.0	6.6	11.5	14.9	21.7	50.8

Table 7B. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California. April

NO. OBSERVATIONS == SURFACE == 2A2. TOP == 198

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	ZONAL WIND			SPD (KNOTS)			ZONAL WIND			SPD (KNOTS)			
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 +1SD	90.0 MEAN	95.0 +1SD	97.5 +2SD	99.0 +2SD	
SFC	13	-14.5	-12.1	-9.5	-6.8	-4.8	-2.4	2.5	7.4	9.8	11.8	14.5	17.1	19.5
1000	453	-16.3	-13.7	-10.9	-6.1	-5.9	-3.3	1.9	7.1	9.7	11.9	14.7	17.5	20.1
950	1870	-19.3	-16.4	-13.3	-10.1	-7.7	-4.8	1.0	6.8	9.7	12.1	15.3	18.4	21.3
900	3340	-16.3	-12.4	-9.3	-6.9	-4.1	-1.7	1.7	7.5	10.3	12.7	15.8	18.9	21.7
850	4908	-19.3	-16.1	-12.6	-9.2	-6.5	-3.3	3.1	9.5	12.7	15.4	18.8	22.3	25.5
800	6545	-10.5	-15.9	-12.0	-8.1	-5.0	-1.4	5.9	13.2	16.8	19.9	23.4	27.7	31.3
750	8278	-20.7	-16.6	-12.1	-7.6	-4.1	-0.1	6.4	16.8	20.9	24.4	28.4	33.4	37.5
700	10112	-21.3	-16.6	-11.5	-6.4	-2.3	2.3	11.8	21.3	26.0	30.0	35.1	40.2	44.9
650	12034	-20.9	-15.8	-10.2	-6.6	-0.3	4.8	15.2	25.6	30.7	35.0	40.6	46.2	51.3
600	14048	-22.5	-16.7	-11.0	-6.1	-1.8	6.6	18.3	30.0	35.8	40.7	47.0	53.3	59.1
550	16312	-25.9	-19.1	-11.7	-6.3	1.4	8.2	21.9	35.6	42.4	48.1	55.8	62.9	69.7
500	18675	-26.2	-19.6	-11.2	-5.3	2.4	10.0	24.6	19.2	24.6	32.5	40.4	48.2	57.4
450	21243	-30.3	-22.0	-13.0	-6.0	3.0	11.3	28.0	44.8	53.0	60.0	69.0	78.0	86.3
400	24042	-31.5	-24.4	-14.4	-6.5	3.3	12.4	31.0	49.6	58.7	66.5	76.4	86.4	95.5
350	27096	-32.6	-23.4	-13.0	-2.6	5.5	15.0	34.4	53.4	63.3	71.4	81.4	92.7	101.7
300	30551	-32.9	-23.0	-12.2	-1.5	6.9	16.8	36.9	56.8	66.7	75.1	85.4	96.6	106.5
250	34495	-26.3	-16.4	-6.4	4.0	12.1	21.6	41.0	60.4	69.9	78.0	85.4	98.6	108.3
200	39144	-19.3	-10.4	-0.7	9.0	16.5	25.4	43.4	61.4	70.3	77.6	87.5	97.2	106.1
175	41900	-9.3	-2.1	5.8	13.7	19.8	27.9	41.7	56.4	63.6	69.7	77.6	85.5	92.7
150	45079	-4.2	2.1	1.8	15.5	20.8	27.0	39.6	52.2	58.4	63.7	70.4	77.2	83.4
125	48737	-1.9	3.7	8.8	14.4	18.7	23.8	36.2	44.6	49.7	54.0	59.6	65.2	70.3
100	53406	-1.3	0.9	5.4	10.0	13.5	17.7	26.1	34.5	38.7	42.2	46.8	51.3	55.5
80	57956	-6.1	-4.9	-0.7	3.6	4.9	10.6	18.7	26.4	30.5	33.8	38.1	42.3	46.2
70	60649	-9.3	-6.3	-3.0	-0.3	2.9	5.9	12.1	18.3	21.3	23.9	27.2	30.5	33.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 79. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: April
NO. OBSERVATIONS -- SURFACE = 282, TOP = 198

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)						MEAN	+150	-150	+250	-250	
		1.0		2.75		5.0							
		-250	+250	-250	+250	-250	+250	-150					
SFC	13	-10.4	-8.9	-7.2	-5.6	-4.3	-2.8	.3	3.4	4.9	6.2	7.8	9.5
100	453	-12.5	-10.8	-9.9	-7.0	-5.5	-3.8	-0.2	3.4	5.1	6.6	8.5	10.4
1870	-13.7	-11.9	-9.9	-7.9	-6.3	-4.5	-2.5	-0.7	3.1	4.9	6.5	8.5	12.1
950	3350	-15.9	-13.9	-11.7	-9.5	-7.6	-5.8	-1.7	2.4	4.4	6.1	8.3	10.5
900	4508	-20.1	-17.6	-14.9	-12.2	-10.1	-7.6	-2.6	2.4	4.9	7.0	9.7	12.4
850	6545	-25.7	-22.5	-19.0	-15.6	-12.9	-9.7	-3.3	3.1	6.3	9.0	12.4	14.9
800	8278	-32.9	-28.8	-24.4	-19.9	-16.5	-12.4	-4.2	4.0	8.1	11.5	16.0	20.4
750	10112	-36.5	-31.8	-26.7	-21.6	-17.7	-13.0	-3.6	5.8	10.5	14.4	19.5	24.5
700	12034	-43.9	-38.2	-32.0	-25.7	-20.9	-15.2	-3.6	8.0	13.7	18.5	24.6	30.3
650	14098	-48.9	-42.5	-35.5	-28.5	-23.1	-16.7	-3.7	9.3	15.7	21.1	31.0	36.7
600	16352	-57.0	-49.5	-41.4	-33.2	-26.9	-19.4	-4.3	10.8	18.3	24.6	35.1	41.5
550	18675	-61.0	-52.9	-44.0	-35.2	-28.3	-20.2	-3.7	12.8	20.9	27.8	32.8	40.9
500	21243	-65.4	-54.6	-45.5	-36.3	-29.2	-20.8	-3.8	13.2	21.6	26.7	36.6	45.5
450	24042	-69.7	-60.4	-50.2	-40.1	-32.2	-22.9	-4.0	14.9	24.2	32.1	42.2	53.6
400	350	-75.1	-64.9	-53.7	-42.6	-33.9	-23.7	-2.9	17.9	28.1	36.6	47.9	55.4
350	27096	-79.1	-68.5	-57.0	-45.5	-36.5	-25.9	-4.5	16.9	27.5	36.5	48.0	59.1
300	30551	-83.5	-72.9	-61.4	-49.5	-40.0	-30.2	-5.5	18.6	29.1	38.1	49.1	59.3
250	34495	-88.0	-78.0	-67.4	-55.9	-44.4	-35.4	-24.8	-3.4	18.0	28.6	37.6	48.4
200	39144	-94.6	-84.6	-75.6	-65.8	-56.0	-46.4	-19.4	-1.2	17.0	26.0	33.6	43.4
175	41910	-98.3	-89.7	-80.4	-70.4	-60.1	-52.7	-15.1	-3.3	15.7	23.3	30.7	42.2
150	45079	-103.4	-93.9	-85.7	-75.7	-67.6	-57.6	-13.7	1.5	16.7	24.2	30.6	40.3
125	48737	-109.1	-99.1	-83.2	-76.8	-69.3	-59.3	-9.4	2.6	14.6	20.5	25.5	34.4
100	53406	-110.0	-105.3	-90.2	-80.2	-70.3	-59.1	-11.2	-6.5	2.9	12.3	17.0	26.0
80	57996	-117.3	-117.3	-117.3	-117.3	-117.3	-117.3	-7.0	-3.9	9.7	13.0	15.6	23.1
70	60649	-114.2	-111.6	-108.8	-108.8	-108.8	-108.8	-1.2	4.0	9.2	11.4	14.0	19.6

NOTE -- POSITIVE COMPONENTS ARE FLOWING TOWARD THE SOUTH.

NEGATIVE COMPONENTS ARE FLOWING AWAY FROM THE SOUTH.

Table 80 Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: May

NO. OBSERVATIONS -- SURFACE = 268; TOP = 193

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)					49.0 +2SD
		1.0 -2SD	5.0 -1SD	10.0 0	15.87 +1SD	25.0 +2SD	
SFC	13	0	0	1.1	2.6	6.3	14.7
1000	430	0	0	1.7	3.6	7.5	14.9
950	1854	0	0	1.3	3.1	6.8	12.3
900	3343	0	0	0.7	2.7	6.8	10.9
850	4921	0	0	1.5	3.2	5.2	9.3
800	6595	0	0	1.5	3.9	5.7	9.3
750	8143	0	0	3.2	5.9	9.1	12.3
700	10194	0	0	3.7	6.8	10.4	17.8
650	12159	0	0	4.2	7.8	12.1	20.8
600	14149	0	0	4.4	8.6	13.5	23.6
550	16610	0	0	4.8	9.7	15.5	27.2
500	18801	0	0	5.7	11.0	17.2	29.9
450	21516	0	0	5.6	11.4	18.3	32.2
400	24334	0	0	6.4	12.8	20.4	35.7
350	27410	0	0	7.0	14.6	22.3	39.5
300	30948	0	0	10.1	17.1	25.3	42.1
250	34944	0	0	12.7	20.0	28.9	47.1
200	39642	0	0	15.4	22.5	30.8	47.8
175	42316	0	0	9.0	16.9	23.1	30.4
150	45218	0	0	4.6	11.5	23.3	30.4
125	49255	0	0	5.7	11.0	20.5	29.3
100	53749	0	0	4.1	7.9	11.7	16.2
80	56323	0	0	1.6	4.7	6.4	10.2
70	61040	0	0	2.3	2.3	3.9	5.8

Table 81. Cumulative Frequency Distribution of the Zonal Upper Wind Component a Standard Pressure Levels for Point Mugu, California: May
NO. OBSERVATIONS -- SURFACE = 266. TOP = 193

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)						97.73 +250	
		1.0		5.0		25.0			
		2.2A -250	-150	8.87 -150	50.0 MEAN	75.0 +150	84.13 -150		
SFC	13	-13.3	-11.0	-8.4	-5.9	-3.7	-1.6	3.2	
1030	430	-15.2	-12.7	-10.0	-7.2	-5.1	-2.6	2.5	
950	1854	-17.2	-14.7	-12.0	-9.2	-7.1	-4.6	4.6	
900	3343	-17.3	-14.7	-11.9	-9.0	-6.6	-4.2	4.2	
850	4921	-17.9	-15.0	-11.8	-8.7	-6.2	-3.3	3.3	
800	6545	-19.7	-16.4	-12.8	-9.1	-6.3	-3.0	3.8	
750	8343	-21.8	-17.8	-13.4	-9.0	-6.6	-3.0	3.8	
700	10154	-22.3	-17.8	-12.9	-8.1	-4.3	-2	9.2	
650	12159	-23.6	-18.6	-13.2	-7.7	-7.5	-1.5	1.5	
600	14245	-22.0	-18.5	-12.5	-6.5	-3.9	-1.9	1.7	
550	16490	-26.3	-18.3	-11.7	-5.1	0	6.0	18.3	
500	18901	-26.0	-17.6	-10.7	-3.7	1.7	8.1	21.0	
450	21516	-22.0	-17.3	-10.0	-2.7	3.0	9.7	23.3	
400	24354	-26.9	-19.4	-11.3	-3.1	3.2	10.7	25.8	
350	27470	-28.6	-20.6	-11.9	-3.2	3.5	11.5	27.6	
300	30968	-30.4	-21.6	-12.0	-2.4	5.0	13.8	31.6	
250	34954	-27.5	-18.4	-8.5	1.5	9.2	12.3	36.8	
200	39642	-20.7	-12.1	-6.7	-2.7	6.7	14.0	22.6	
175	42348	-12.3	-5.0	3.0	11.0	17.2	24.5	39.4	
150	45538	-3.7	2.1	8.5	14.8	19.8	25.6	37.5	
125	49245	-0.6	4.0	9.0	14.0	17.9	22.5	32.5	
100	53749	-1.7	1.7	5.4	9.2	12.1	15.5	22.5	
80	58323	-7.2	-4.7	-1.9	-1.8	3.0	5.5	10.7	
70	61040	-9.6	-7.4	-5.0	-2.5	-0.6	1.6	6.2	

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 82. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: May

NO. OBSERVATIONS -- SURFACE = 268, TOP = 193

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft.)	MERIDIONAL WIND SPEED (KNOTS)						95.0 +150	97.73 +250
		1.0 -250	2.2A -250	5.0 -150	10.0 -150	15.07 -150	25.0 -150		
SFC	13	-12.0	+0.2	-8.2	-6.2	-4.7	-2.9	.6	4.5
1000	410	-11.8	-10.1	-8.3	-6.4	-5.0	-3.3	-1	3.6
950	1854	-110.3	-84.8	-72.2	-56.6	-44.3	-28.6	-7.2	3.2
900	3143	-111.4	-94.9	-83.3	-66.7	-55.4	-33.9	-0.9	2.1
850	4921	-115.8	-113.8	-111.6	-95.5	-78.6	-53.8	-1.6	4.2
800	6505	-222.2	-194.3	-162.2	-130.0	-104.6	-77.7	-1.9	5.9
750	8343	-28.9	-24.4	-20.6	-16.3	-13.0	-9.1	-1.1	6.9
700	10194	-31.1	-26.7	-21.9	-17.2	-13.5	-9.1	-0.3	6.5
650	12159	-36.5	-31.4	-25.8	-20.2	-15.8	-10.7	-0.2	10.3
600	12249	-39.6	-34.0	-27.8	-21.7	-16.9	-11.3	-2	11.7
550	16490	-44.3	-37.9	-30.9	-23.9	-18.5	-12.1	-9	13.9
500	18901	-46.2	-39.4	-31.9	-26.5	-18.7	-11.9	-2.9	20.3
450	5116	-51.1	-43.6	-35.6	-29.4	-21.0	-13.5	-1.6	16.4
400	2354	-56.3	-48.1	-39.2	-30.2	-23.3	-15.1	-1.5	12.9
350	27470	-57.9	-51.9	-39.8	-30.6	-23.5	-15.1	-1.9	16.1
300	30948	-57.9	-49.3	-39.9	-30.4	-23.1	-15.5	-3.1	17.3
250	36954	-62.6	-53.1	-42.8	-32.4	-24.4	-14.9	-4.3	20.3
200	39642	-60.8	-42.7	-33.9	-25.1	-18.3	-10.2	-6.1	22.4
175	42349	-39.4	-32.6	-25.2	-17.8	-12.1	-5.3	-8.4	20.5
150	45518	-30.1	-24.5	-18.4	-12.3	-7.6	-2.0	-9.3	22.1
125	49245	-24.5	-16.9	-14.9	-9.6	-5.9	-1.3	-8.1	17.5
100	53149	-17.6	-14.1	-10.5	-6.8	-4.0	-0.7	-6.1	12.9
80	58325	-15.1	-12.5	-9.7	-6.8	-4.6	-2.0	-3.3	8.6
70	61040	-12.5	-10.5	-8.3	-6.0	-4.3	-2.3	-1.9	6.1

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 83. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: June

NO. OBSERVATIONS -- SURFACE = 230, TOP = 173

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)											
		1.0 2.0 5.0			10.0 15.0 25.0			50.0 75.0 100.0			90.0 95.0 97.73 +250		
		1.0	2.0	5.0	10.0	15.0	25.0	50.0	75.0	100.0	90.0	95.0	97.73 99.0
SFC	13	0	0	0	1.1	2.3	3.6	6.7	9.6	11.1	12.3	13.9	15.5
1000	344	0	0	0	1.2	1.3	2.6	5.3	8.0	9.3	10.4	11.9	14.6
950	1821	0	0	0	1.0	1.9	3.0	5.2	7.4	8.5	9.4	10.6	13.3
900	3320	0	0	0	1.0	1.3	2.8	5.9	9.0	10.5	11.8	13.6	15.1
850	4921	0	0	1.1	2.9	4.2	5.8	9.0	12.2	13.8	15.1	16.9	16.6
800	6608	0	0	1.8	3.8	5.4	7.3	11.1	14.9	16.8	18.4	20.4	20.2
750	8396	0	0	1.7	4.4	6.4	8.8	13.7	18.6	21.0	23.6	25.7	24.4
700	13272	0	0	2.4	5.5	7.9	10.7	16.5	22.3	25.1	27.5	30.6	30.7
650	12270	0	0	2.2	5.7	8.4	11.6	18.1	24.6	27.8	30.5	33.7	36.5
600	14393	0	0	1.8	5.0	8.3	12.2	20.0	27.8	31.7	34.0	37.5	40.7
550	16643	0	0	1.8	5.5	8.2	13.5	22.3	31.1	35.4	39.2	43.4	47.3
500	17114	0	0	5.3	9.6	14.6	24.8	35.0	46.0	49.3	52.8	55.2	52.4
450	21768	0	0	5.8	10.7	16.5	28.3	40.1	45.9	50.8	57.2	63.5	69.3
400	24652	0	0	5.9	11.5	18.1	31.6	45.1	51.7	57.3	64.6	71.8	78.4
350	27802	0	0	6.5	12.8	20.3	35.4	50.5	58.0	64.3	72.5	80.6	88.1
300	31358	0	0	7.8	14.7	22.8	39.3	55.8	63.9	70.6	79.6	88.5	96.6
250	35400	0	0	3.6	12.6	19.6	27.8	44.6	61.3	69.6	76.6	85.0	94.6
200	40148	0	2	8.8	17.4	24.1	32.0	43.0	64.0	71.9	78.6	87.2	102.8
175	42917	0	2.2	10.2	18.2	24.4	31.7	46.6	61.5	69.8	75.0	83.0	103.7
150	16063	0	3.1	9.8	16.5	21.7	27.8	40.3	52.8	58.9	64.1	70.9	98.3
125	49747	0	1.6	6.7	11.8	15.8	20.5	30.0	39.5	44.2	48.2	53.3	63.6
100	54226	0	0	3.8	6.8	10.3	17.4	24.5	30.0	31.0	34.6	38.6	42.1
80	58717	0	0	3	2.3	3.9	5.8	9.6	13.4	15.3	16.9	21.0	22.9
70	61430	0	0	.5	2.5	4.0	5.8	9.4	13.0	14.8	16.3	18.3	22.0

Table 6A. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: June
NO. OBSERVATIONS -- SURFACE = 230. TOP = 173

PRESSURE LEVEL (mb)	MEAN HEIGHT (FT)	2.2% 5.0 10.0 15.9% 25.0					50.0 64.1% 75.0 84.1% 90.0 95.0 97.3% 99.0							
		-250	-150	-50	MEAN	-50	-750	-150	-50	MEAN	-750	-150		
SFC	13	-1.0	-9.7	-7.1	-5.0	-3.3	-1.4	2.6	6.6	8.5	10.2	12.3	14.6	16.3
1000	344	-10.3	-8.4	-6.8	-5.9	-4.5	-1.6	1.6	5.0	6.7	8.1	10.0	11.8	13.5
950	1621	-12.2	-10.5	-8.7	-7.8	-6.8	-1.5	-0.6	-0.3	3.1	4.3	6.2	9.9	11.6
900	3320	-13.0	-11.0	-9.6	-8.6	-7.6	-1.6	-2.5	-1.7	5.9	8.0	9.8	12.0	14.3
850	4921	-13.7	-11.2	-9.5	-8.5	-7.8	-1.7	-2.2	3.4	8.8	11.3	13.4	16.1	16.4
800	6618	-15.2	-12.4	-10.3	-9.3	-8.3	-1.9	-1.1	4.4	10.3	13.1	15.5	18.5	21.3
750	8354	-18.9	-15.4	-11.5	-11.7	-11.7	-1.7	6.0	13.2	16.7	19.7	23.5	27.6	30.9
700	10272	-24.1	-19.7	-14.9	-10.1	-6.3	-1.2	-1.2	7.1	16.1	20.5	24.3	29.1	33.9
650	12270	-24.5	-19.8	-14.7	-9.6	-5.6	-1.9	-2.9	8.4	18.1	22.0	26.8	31.9	37.0
600	14303	-24.3	-19.3	-13.9	-8.4	-4.2	-1.2	-1.2	10.9	21.0	26.0	30.2	35.7	41.1
550	16663	-24.3	-18.9	-13.0	-7.2	-2.6	-1.7	-2.6	13.7	24.6	30.6	34.6	40.4	46.1
500	19114	-26.2	-20.3	-13.8	-7.3	-2.3	-1.6	-1.7	15.7	27.8	33.7	38.7	45.2	51.3
450	21768	-28.5	-21.4	-14.5	-7.2	-1.5	-1.5	5.2	18.8	32.4	44.8	52.1	59.4	57.6
400	24652	-30.2	-22.9	-14.9	-6.9	-0.7	6.6	21.5	36.4	43.7	49.9	57.9	65.9	73.2
350	27802	-30.6	-22.8	-14.5	-5.8	-0.8	8.6	24.4	40.2	48.0	54.6	63.1	71.6	79.4
300	31358	-32.1	-23.6	-14.3	-5.1	-0.1	10.6	27.8	45.0	53.5	60.7	69.9	79.2	87.7
250	35400C	-29.4	-21.0	-11.4	-1.7	5.8	14.6	12.6	50.6	59.4	66.9	76.0	86.2	95.0
200	40148	-24.2	-15.6	-6.2	-3.2	10.5	10.1	16.6	54.1	62.7	70.0	79.4	88.8	97.4
175	42917	-20.1	-12.1	-3.6	5.3	12.0	20.0	16.1	52.2	60.2	66.9	75.6	84.3	92.3
150	46063	-16.3	-7.7	-0.5	6.7	12.3	16.9	32.3	45.7	52.3	57.9	65.1	72.3	78.9
125	49747	-13.0	-7.7	-1.9	3.8	4.3	13.6	24.3	35.0	42.3	44.8	50.5	56.3	61.6
100	54224	-16.7	-12.6	-6.2	-3.7	-0.3	3.8	12.0	20.2	24.3	27.7	32.2	36.6	40.7
80	59717	-20.6	-17.6	-14.4	-11.1	-8.6	-5.6	-5.4	6.4	11.9	15.2	18.4	21.4	24.4
70	61430	-26.0	-20.2	-11.5	-14.9	-12.8	-10.4	-5.4	-6.4	2.0	4.1	6.7	9.4	11.8

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 85. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: June
NO. OBSERVATIONS = SURFACE = 230. TOP = 173

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT.)	MERIDIONAL WIND SPEED (KNOTS)										
		1.0 -250	5.0 -150	10.0 -150	15.07 -150	25.0 MEAN	<0.0 -150	75.0 MEAN	84.13 -150	90.0 -150	95.0 -150	97.73 +250
SFC	13	-9.3	-7.8	-6.2	-4.6	-3.3	-1.8	1.2	4.2	9.7	10.2	11.7
1000	384	-7.4	-6.2	-4.9	-3.5	-2.5	-1.3	1.2	3.7	4.9	7.3	9.8
950	1821	-6.6	-5.5	-4.3	-3.1	-2.2	-1.1	1.1	3.3	4.4	5.3	6.6
900	3220	-9.1	-7.9	-6.6	-5.3	-4.3	-3.1	-0.7	1.7	2.9	3.9	7.7
850	4921	-14.6	-12.9	-11.0	-9.2	-7.7	-6.0	-2.5	1.0	2.7	4.2	6.0
800	6308	-20.0	-17.6	-14.9	-12.3	-10.4	-7.8	-2.8	2.2	4.6	6.7	9.3
750	8396	-23.7	-20.6	-17.2	-13.6	-11.1	-8.0	-1.6	4.8	7.9	10.6	14.4
700	10272	-25.6	-22.0	-18.1	-14.2	-11.2	-7.6	-0.4	6.8	10.4	14.0	20.5
650	12210	-28.3	-22.3	-19.9	-15.5	-12.1	-8.1	-1.1	8.3	12.3	13.4	21.2
600	14193	-32.1	-27.6	-22.7	-17.7	-13.9	-9.4	-0.2	9.0	13.5	15.7	20.1
550	16663	-34.6	-29.7	-24.4	-19.1	-15.0	-10.1	-0.3	9.5	14.4	18.5	24.5
500	19114	-38.9	-33.4	-27.4	-21.4	-16.7	-11.2	0	11.2	16.7	21.4	33.4
450	21768	-43.3	-37.1	-30.4	-23.6	-18.4	-12.2	-0.3	12.8	19.0	24.2	37.7
400	24652	-48.9	-41.9	-34.3	-26.6	-20.7	-13.7	-5	14.7	21.7	27.6	43.9
350	27002	-57.2	-69.0	-40.1	-31.1	-24.2	-16.0	-6	17.2	25.4	32.3	42.9
300	31358	-61.5	-52.7	-43.1	-33.4	-25.9	-17.1	-9	18.9	21.7	35.2	58.4
250	35670	-64.0	-55.5	-44.1	-33.8	-25.7	-16.2	-3.1	22.4	30.9	44.9	63.3
200	40148	-61.5	-52.0	-41.6	-31.3	-23.2	-13.7	5.6	24.9	36.4	42.5	70.2
175	42817	-56.5	-47.5	-37.7	-27.9	-20.3	-11.3	6.9	25.1	34.1	41.7	63.2
150	46063	-43.0	-35.8	-28.0	-20.2	-14.1	-6.9	-6.9	22.1	29.3	35.4	51.0
125	49147	-29.9	-26.9	-19.5	-16.0	-9.6	-4.8	5.3	15.4	20.4	24.6	35.5
100	54226	-21.7	-18.2	-14.4	-10.6	-7.6	-4.1	3.0	10.1	13.6	16.6	20.4
80	58717	-13.1	-11.0	-8.7	-6.4	-4.6	-2.5	1.8	6.1	8.2	10.0	14.6
70	61430	-11.4	-9.6	-7.6	-5.6	-4.0	-2.2	1.6	5.4	7.2	8.6	12.8

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 86. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: July
NO. OBSERVATIONS == SURFACE 239, TOP = 195

PRESSURE LEVEL (MASL)	MEAN HEIGHT (ft.)	SCALAR WIND SPEED (KILOMETERS PER HOUR)									
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0	40.0	50.0
SFC	1.3	0	0	.4	1.6	3.0	5.0	8.6	10.0	11.2	12.7
1000	397	0	0	0	0.6	2.0	4.0	7.6	9.0	10.2	11.7
950	1867	0	0	0	1.5	1.9	4.7	7.5	8.9	10.1	11.6
900	3369	0	0	0	0	0.3	5.0	11.3	14.0	16.3	19.2
850	4917	0	0	0	1.2	1.5	3.1	6.3	9.5	11.1	12.4
800	6759	0	0	1.1	2.0	4.4	6.1	11.3	13.6	15.1	17.1
750	8517	0	0	1.5	2.5	4.9	9.8	14.7	17.1	19.1	21.6
700	10413	0	0	1.4	2.7	4.4	6.4	10.6	14.4	16.8	18.5
650	12411	0	0	1.5	3.0	4.9	7.2	11.8	14.6	16.7	20.6
600	14570	0	0	1.5	3.3	5.5	8.1	13.3	16.5	21.1	23.3
550	16854	0	0	1.0	3.0	5.4	8.2	13.8	19.4	22.2	24.6
500	19318	0	0	1.3	3.3	5.8	8.6	14.9	21.0	24.0	26.5
450	21991	0	0	1.1	3.8	6.7	10.1	17.0	23.9	27.3	30.2
400	24675	0	0	0.9	3.9	7.2	11.1	18.9	26.7	30.6	33.9
350	28110	0	0	0.7	5.4	9.1	13.5	22.3	31.1	35.5	39.2
300	31699	0	0	3.0	6.2	12.3	17.1	26.9	36.7	41.5	45.6
250	35874	0	0	6.2	11.8	16.2	21.3	31.8	42.3	47.4	51.8
200	40673	0	0	2.5	8.5	14.6	19.3	24.8	36.1	41.4	52.9
175	43439	0	0	1.2	6.5	12.7	17.6	23.3	35.0	46.7	57.4
150	46542	0	0	4.0	9.6	13.9	19.6	29.4	39.8	44.9	54.2
125	50174	0	0	3.4	7.3	10.4	14.0	21.4	32.6	35.5	39.4
100	54567	0	0	2.5	3.3	5.4	7.9	13.0	18.1	20.6	22.7
80	59012	0	0	2.6	4.6	6.6	8.7	12.9	17.1	19.2	21.0
70	61709	0	1.3	3.7	4.1	6.0	8.0	10.2	19.2	21.4	23.3

Table 87. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: July

NO. OBSERVATIONS -- SURFACE = 239. TOP = 195

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	ZONAL WIND SPEED (KNOTS)			WIND SPEED (KNOTS)			WIND SPEED (KNOTS)						
		1.0 -250	2.0 -500	5.0 -150	10.0 -250	15.0 -500	25.0 -150	50.0 -250	75.0 -500	90.0 -150	95.0 -250			
SFC	13	-10.2	-8.4	-6.4	-4.4	-2.9	-1.1	2.6	6.3	8.1	9.6	11.6	13.6	15.4
1000	377	-10.5	-8.8	-7.0	-5.1	-3.7	-2.0	1.4	4.8	6.5	7.9	9.8	11.6	13.3
950	1867	-12.0	-10.4	-8.7	-7.0	-5.7	-4.1	-1.0	2.1	3.7	5.0	6.7	8.4	10.0
900	3369	-19.3	-16.5	-13.4	-10.3	-7.9	-5.1	-0.7	6.5	9.3	11.7	14.8	17.5	20.7
850	4997	-13.2	-11.1	-8.8	-6.5	-4.7	-2.6	1.7	6.0	8.1	9.9	12.2	14.5	16.6
800	6709	-12.1	-10.0	-7.7	-5.3	-3.5	-1.4	3.0	7.4	9.5	11.3	13.7	16.0	18.1
750	8517	-13.7	-11.3	-8.7	-6.0	-4.0	-1.6	1.6	6.6	8.2	10.6	12.6	15.3	17.9
700	10433	-14.3	-11.3	-9.1	-6.3	-4.2	-1.7	3.4	8.5	11.0	13.1	15.9	18.6	21.1
650	12411	-16.6	-13.8	-10.7	-7.7	-5.3	-2.5	3.2	8.9	11.7	14.1	17.1	20.2	23.0
600	14510	-19.8	-16.5	-12.9	-9.4	-6.6	-3.3	3.3	9.9	13.7	16.9	19.5	23.1	26.4
550	16934	-20.2	-16.8	-13.1	-9.5	-6.6	-3.2	3.6	10.4	13.8	16.7	20.3	24.0	27.4
500	19318	-22.4	-18.7	-14.6	-10.6	-7.4	-3.7	3.9	11.5	15.2	18.4	22.4	26.5	30.2
450	21991	-24.7	-20.5	-16.0	-11.4	-7.9	-3.7	4.7	13.1	17.3	20.3	25.4	29.9	34.1
400	24995	-24.7	-20.3	-15.5	-10.7	-7.0	-2.6	6.3	15.2	19.6	23.3	28.1	32.9	37.3
350	28010	-26.1	-21.3	-16.0	-10.8	-6.7	-1.9	7.9	17.7	22.5	26.6	31.3	37.1	41.9
300	31619	-26.1	-21.9	-15.2	-9.5	-5.0	-0.2	10.9	21.6	26.8	31.3	37.0	42.7	47.9
250	35604	-27.2	-21.6	-15.5	-9.4	-4.6	1.0	12.4	23.6	29.4	34.2	40.3	46.4	52.0
200	40623	-26.8	-21.1	-14.9	-8.7	-3.9	1.8	13.3	24.8	30.5	35.3	41.5	47.7	53.4
175	43619	-23.1	-17.9	-12.2	-6.5	-2.1	3.1	13.7	24.3	29.5	33.6	39.6	45.3	50.5
150	46562	-20.1	-15.6	-10.7	-5.3	-2.0	2.5	11.6	20.7	25.2	29.4	33.9	38.8	43.3
125	50174	-20.2	-16.3	-12.1	-7.9	-4.6	-0.7	7.1	14.9	18.8	22.1	26.3	30.5	34.4
100	54567	-20.9	-18.2	-15.2	-12.3	-10.0	-7.3	-1.8	3.7	6.4	8.7	11.6	14.6	17.3
80	59012	-25.0	-22.7	-20.1	-17.6	-15.6	-13.3	-8.5	-3.7	-1.4	3.1	5.7	8.0	10.7
70	617n9	-28.9	-26.5	-23.9	-21.3	-19.3	-16.9	-7.3	-4.9	-2.9	-0.3	2.3	4.7	6.7

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 86. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California - July

NO. OBSERVATIONS = SURFACE = 239, TOP = 195

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	CUMULATIVE FREQUENCY (%)									
		1.0 -250	2.0 -500	5.0 -1500	10.0 -3000	15.0 -5000	20.0 -7500	50.0 -15000	75.0 -30000	90.0 -75000	95.0 -150000
SFC	1.3	0	0	0	0	1.6	3.0	5.8	8.6	10.0	11.2
1000	397	0	0	0	0	2.0	4.8	7.6	9.6	10.2	11.7
950	1847	0	0	0	0	1.9	4.7	7.5	8.9	10.1	11.6
900	3369	0	0	0	0	3.1	5.8	11.3	16.0	16.3	17.1
850	4997	0	0	0	0	1.5	3.1	6.3	9.5	11.1	12.4
800	6719	0	0	0	0	1.1	2.6	4.4	6.1	11.8	13.6
750	6517	0	0	0	0	2.5	4.9	9.8	14.7	17.1	19.1
700	10413	0	0	0	0	2.7	4.4	6.4	10.6	14.8	16.8
650	12431	0	0	0	0	1.5	3.0	4.9	7.2	11.8	16.4
600	14570	0	0	0	0	1.5	3.3	5.5	8.1	13.3	18.5
550	16854	0	0	0	0	1.0	2.0	4.2	6.8	13.8	19.4
500	19318	0	0	0	0	3.3	5.4	8.4	14.3	17.3	21.0
450	21991	0	0	0	0	1.1	1.8	6.7	10.1	17.0	23.9
400	24895	0	0	0	0	1.9	3.9	7.2	11.1	18.9	26.7
350	28100	0	0	0	0	1.7	5.4	9.1	13.5	22.3	31.1
300	31699	0	0	0	0	3.0	8.2	12.3	17.1	26.9	36.7
250	35804	0	0	0	0	6.2	11.8	16.2	21.3	31.8	42.3
200	40624	0	0	0	0	2.5	8.5	14.6	19.3	24.8	36.1
175	43409	0	0	0	0	1.2	6.5	12.7	17.6	23.3	35.0
150	46542	0	0	0	0	1.0	4.0	9.6	13.9	19.0	29.4
125	50174	0	0	0	0	3.4	7.3	10.4	14.0	21.4	28.6
100	54557	0	0	0	0	2.5	3.3	5.4	7.9	13.0	18.1
80	59012	0	0	0	0	2.6	4.8	6.8	8.7	12.9	17.1
70	61709	0	0	0	0	3.7	6.1	8.5	10.2	14.7	19.2

Table 88. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: July
 NO. OBSERVATIONS -- SURFACE = 239. TOP = 195

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)												
		1.0	2.2A -250	5.0	10.0	15.97 -150	25.0	50.0 MEAN	84.13 +150	90.0 +150	95.0 +150	97.73 +250	99.0 +250	
SFC	13	-8.7	-7.4	-6.0	-4.6	-3.5	-2.2	*4	3.0	4.3	5.4	6.8	8.2	9.5
1000	347	-7.0	-5.9	-4.7	-3.5	-2.6	-1.5	*7	2.9	4.0	4.9	6.1	7.3	8.4
950	1847	-7.8	-6.5	-5.1	-3.7	-2.6	-1.3	1.3	3.9	5.2	6.3	7.7	9.1	10.4
900	3369	-11.2	-9.5	-7.6	-5.8	-4.3	-2.6	*9	4.4	6.1	7.6	9.4	11.3	13.0
850	4997	-9.5	-8.0	-6.4	-4.8	-3.6	-2.1	*8	3.7	5.2	6.4	8.0	9.6	11.1
800	6709	-12.9	-10.8	-8.5	-6.2	-4.4	-2.3	2.0	6.3	8.4	10.2	12.5	14.8	16.9
750	8517	-15.5	-12.8	-9.8	-6.8	-4.5	-1.8	3.8	9.4	12.1	14.4	17.4	20.4	23.1
700	10413	-12.0	-9.6	-6.9	-4.3	-2.2	-0.2	5.2	10.2	12.6	14.7	17.3	20.0	22.4
650	12231	-12.2	-9.6	-6.7	-3.8	-1.6	1.0	6.4	11.8	14.4	16.6	19.5	22.4	25.0
600	14510	-12.5	-9.7	-6.6	-3.5	-1.1	1.0	7.5	13.3	16.1	18.5	21.6	24.7	27.5
550	16654	-12.4	-9.5	-6.3	-3.2	-0.7	2.2	8.1	14.0	16.9	19.4	22.5	25.7	28.6
500	19318	-13.5	-10.4	-7.0	-3.6	-0.9	2.2	8.6	15.0	18.1	20.8	24.2	27.6	30.7
450	21991	-14.2	-10.7	-6.9	-3.1	-0.2	3.3	10.3	17.3	20.8	23.7	27.7	31.3	34.8
400	24895	-17.3	-13.2	-8.8	-4.3	-0.9	3.2	11.4	19.6	23.7	27.1	31.6	36.0	40.1
350	28100	-18.0	-13.4	-8.4	-3.4	-0.5	5.1	14.4	23.7	28.3	32.2	37.2	42.2	44.8
300	31669	-22.4	-16.4	-10.2	-3.9	1.1	6.9	18.8	30.7	36.5	41.5	47.8	54.2	60.0
250	35004	-12.8	-7.6	-1.9	3.7	8.1	13.3	23.8	34.3	43.9	49.5	55.2	60.4	66.4
200	40623	-13.2	-7.3	-0.9	5.5	10.5	16.4	28.3	40.2	46.1	51.1	57.5	63.9	69.4
175	43019	-14.5	-6.5	-2.0	4.5	9.6	15.6	27.7	39.8	45.8	50.9	57.4	63.9	69.9
150	46562	-13.6	-8.4	-2.7	3.0	7.4	12.6	23.7	33.8	39.0	43.4	49.1	54.8	60.0
125	50174	-9.5	-5.8	-1.8	2.2	5.3	9.0	16.4	23.8	27.5	30.6	34.6	38.6	42.3
100	54367	-10.6	-7.8	-4.7	-1.7	3.7	3.5	9.7	14.9	17.7	20.1	23.1	26.2	29.0
80	59012	-11.8	-9.4	-6.7	-4.1	-2.0	-0.4	5.4	10.4	12.8	14.9	17.5	20.2	22.6
70	61199	-13.1	-10.4	-8.2	-5.7	-3.7	-1.4	3.4	8.2	10.5	12.5	15.0	17.6	19.6

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 89. Cumulative Frequency Distribution of Upper Winds (Scalair) at Standard Pressure Levels for Point Mugu, California: August
NO. OBSERVATIONS -- SURFACE = 282. TOP = 238

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)										
		1.0	2.2	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
SFC	13	0	0	0	2.1	3.4	5.9	8.4	9.7	10.8	12.1	13.5
1000	397	0	0	0	1.3	2.6	5.1	7.6	8.9	10.6	11.3	12.7
950	1854	0	0	0	1.6	2.9	5.4	7.9	9.2	10.3	11.6	13.0
900	3376	0	0	0	1.3	2.6	5.3	8.0	9.3	10.4	11.9	13.3
850	50n9	0	0	0	2.1	3.7	6.9	10.1	11.7	13.0	14.8	16.3
800	67n9	0	0	0	1.9	3.3	5.0	8.4	11.6	13.5	14.9	16.8
750	8507	0	0	0	2.7	4.3	6.2	10.1	14.0	15.9	17.5	19.6
700	10407	0	0	0	4.6	4.8	6.9	11.3	15.7	17.6	22.0	24.3
650	12421	0	0	0	2.4	4.5	7.0	12.1	17.2	19.7	21.8	24.6
600	14560	0	0	0	1.9	4.2	7.1	12.9	18.7	21.6	24.9	27.2
550	16844	0	0	0	1.5	3.3	6.6	13.4	20.2	23.5	26.3	30.0
500	19304	0	0	0	1.9	3.9	7.5	14.7	21.9	25.5	28.5	32.4
450	21978	0	0	0	1.6	4.9	8.8	16.7	24.6	28.5	31.8	36.3
400	24892	0	0	0	2.6	6.1	10.2	18.6	27.0	31.1	34.6	40.3
350	38084	0	0	0	3.8	7.6	12.1	21.1	30.1	34.6	38.4	43.6
300	51640	0	0	0	5.1	9.4	14.5	24.8	35.1	40.2	44.5	50.1
250	35771	0	0	0	3.1	9.1	13.7	19.2	30.3	41.4	46.9	51.5
200	40584	0	0	0	2.2	6.2	12.2	16.9	22.4	35.3	50.3	55.0
175	43373	0	0	0	6.6	12.3	16.8	22.0	32.7	43.4	48.6	53.1
150	466512	0	0	0	5.1	10.1	14.0	18.6	27.9	37.2	41.8	50.7
125	50154	0	0	0	1.7	5.7	9.8	12.5	19.9	27.3	31.0	36.1
100	54570	0	0	0	1.4	3.6	5.4	7.5	11.7	15.9	18.0	22.0
80	59026	0	0	0	2.6	4.4	6.8	7.4	10.6	15.8	17.2	20.8
70	51729	0	0	0	1.7	2.6	4.5	6.0	7.7	11.3	16.6	21.9

Table 90. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: August

NO. OBSERVATIONS -- SURFACE = 282, TOP = 236

PRESSURE LEVEL (MBSI)	MEAN HEIGHT (FT)	NO. OF OBSERVATIONS			ZONAL WIND SPEED (KNOTS)			NO. OF OBSERVATIONS						
		1.0	2.28	5.0	10.0	15.87	25.0	50.0	75.0	64.13	90.0	95.0	97.73	99.0
SFC	13	-9.0	-7.4	-5.6	-3.8	-2.4	-0.8	2.6	5.9	7.6	9.0	10.8	12.6	14.3
1000	397	-10.0	-8.4	-6.6	-4.9	-3.5	-1.9	1.4	4.7	6.3	7.7	9.4	11.2	12.8
950	1854	-13.2	-11.5	-9.6	-7.7	-6.2	-4.5	-0.9	2.7	4.4	5.9	7.8	9.7	11.4
900	3376	-13.2	-11.3	-9.2	-7.1	-5.5	-3.6	-0.3	4.2	6.1	7.7	9.8	11.9	13.8
850	5000	-14.1	-11.9	-9.5	-7.1	-5.2	-3.0	1.5	6.0	8.2	10.1	12.5	14.9	17.1
800	6779	-13.6	-11.3	-8.7	-6.2	-4.2	-1.9	2.9	7.7	10.0	12.0	14.5	17.1	19.4
750	8507	-15.2	-12.6	-9.8	-6.9	-4.7	-2.1	3.2	6.5	11.1	13.3	16.2	19.0	21.6
700	10407	-18.0	-15.0	-11.8	-8.5	-6.0	-3.0	3.0	9.0	12.0	14.5	17.8	21.0	24.0
650	12421	-20.8	-17.4	-13.7	-10.0	-7.1	-3.7	3.2	10.1	13.5	16.4	20.1	23.8	27.2
600	14560	-23.4	-19.6	-15.5	-11.3	-8.1	-4.3	3.4	11.1	14.9	18.1	22.3	26.4	30.2
550	16844	-24.4	-20.3	-15.9	-11.4	-8.0	-3.9	4.3	12.5	16.6	20.0	24.5	28.9	33.0
500	19304	-24.8	-20.4	-15.6	-10.9	-7.2	-2.8	6.0	14.8	19.2	22.9	27.6	32.4	36.8
450	21978	-25.1	-20.4	-15.3	-10.2	-6.2	-1.5	8.0	17.5	22.2	26.2	31.3	36.4	41.1
400	24882	-24.5	-19.6	-14.2	-8.8	-4.6	-0.3	10.4	20.4	25.4	29.6	35.0	40.4	45.4
350	28084	-22.9	-17.8	-12.3	-6.7	-2.4	2.7	13.0	23.3	28.4	32.7	38.3	43.8	48.9
300	31680	-23.4	-17.9	-11.9	-5.8	-1.1	4.4	15.7	27.0	32.5	37.2	43.3	49.3	54.8
250	35771	-22.9	-16.9	-10.3	-3.7	1.4	7.4	19.7	32.0	38.0	43.1	49.1	56.3	62.3
200	40584	-22.6	-16.4	-9.6	-2.8	2.5	8.7	21.4	34.1	40.3	45.6	52.4	59.2	65.4
175	43373	-17.7	-12.2	-6.2	-0.1	4.6	10.1	21.4	32.7	38.2	42.9	49.0	55.0	60.5
150	46512	-15.7	-10.9	-5.7	-0.5	3.5	8.3	17.9	27.5	32.3	36.3	41.5	46.7	51.5
125	50154	-19.6	-15.2	-10.4	-5.7	-2.0	2.4	1.2	20.0	24.4	28.1	32.8	37.6	42.0
100	54570	-20.9	-17.7	-14.2	-10.8	-8.1	-4.9	1.5	7.9	11.1	13.6	17.2	20.7	23.9
80	59026	-23.5	-21.0	-8.3	-15.5	-13.4	-10.9	-5.8	-0.7	1.8	3.9	6.7	9.4	11.9
70	61729	-24.6	-22.4	-20.0	-17.5	-15.6	-13.4	-8.8	-4.2	-0.1	2.4	4.8	7.6	

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 91. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: August

NO. OBSERVATIONS -- SURFACE = 282. TOP = 238

PRESSURE LEVEL (inches)	MEAN HEIGHT (feet)	MERIDIONAL WIND SPEED (KILOMETERS PER HOUR)					MEAN	50.0	75.0	80.0	90.0	95.0	97.73	99.0
		1.0	2.0	5.0	10.0	15.0								
SFC	13	-9.6	-8.2	-6.7	-5.2	-4.1	-2.7	0	2.7	4.1	5.2	6.7	8.2	9.6
1000	397	-8.7	-7.4	-6.0	-4.7	-3.6	-2.3	-0.2	2.7	4.0	5.1	6.4	7.8	9.1
950	1854	-7.6	-6.4	-5.1	-3.7	-2.7	-1.5	1.0	3.5	4.7	5.7	7.1	8.4	9.6
900	3376	-6.9	-5.8	-4.6	-3.5	-2.6	-1.5	0.6	2.7	3.8	4.7	5.8	7.0	8.1
850	5950	-10.4	-9.2	-7.5	-6.7	-5.7	-4.4	-2.8	4	3.6	5.2	6.5	8.3	10.0
800	6709	-13.1	-11.1	-8.9	-7.5	-6.9	-5.0	-3.0	1.1	5.2	7.2	8.9	11.1	13.3
750	8507	-13.9	-11.5	-9.9	-8.2	-7.2	-5.7	-3.8	3.1	6.0	10.4	12.4	15.1	20.1
700	10407	-13.1	-10.6	-7.9	-5.1	-3.9	-2.0	-0.5	4.6	9.7	12.2	14.3	17.7	22.3
500	12421	-13.4	-10.8	-7.9	-5.0	-2.8	-0.2	5.7	10.6	13.2	15.4	18.3	21.2	23.0
600	14560	-14.2	-11.4	-8.4	-5.4	-3.0	-0.2	5.4	11.0	13.8	16.2	19.2	22.2	25.0
550	16844	-16.0	-13.0	-9.7	-6.4	-3.8	-0.8	5.4	11.6	14.6	17.2	20.5	23.8	26.8
500	19304	-18.0	-14.7	-11.1	-7.6	-4.8	-1.5	5.1	11.7	15.0	17.8	21.3	24.9	28.2
450	21978	-20.4	-16.7	-12.7	-8.7	-5.6	-1.9	5.5	12.9	16.6	19.7	23.7	27.7	31.4
400	24892	-21.5	-17.6	-13.4	-9.2	-6.0	-2.0	5.8	13.6	17.5	20.8	25.0	29.2	33.1
350	28044	-21.4	-17.4	-12.7	-8.1	-4.6	-0.4	6.0	16.4	20.6	24.1	28.7	33.2	37.4
300	31640	-24.2	-19.3	-14.0	-8.6	-4.5	-0.4	10.3	20.2	25.1	29.1	34.6	39.9	44.8
250	35771	-24.7	-19.2	-13.2	-7.2	-2.6	-0.9	14.0	25.1	30.6	35.2	41.2	47.2	52.7
200	40540	-25.3	-19.4	-13.0	-6.5	-1.5	-0.4	16.4	28.4	34.3	39.3	45.8	52.2	58.1
175	43373	-24.1	-18.7	-12.0	-5.7	-0.8	0.0	16.7	28.4	34.2	39.1	45.6	51.7	57.5
150	46512	-22.2	-17.1	-11.5	-5.9	-1.5	3.6	14.1	24.6	29.7	34.1	39.7	45.3	50.4
125	50156	-17.5	-13.7	-9.6	-5.4	-2.2	1.6	9.3	17.0	20.8	24.0	28.2	32.3	36.1
100	54570	-13.8	-11.2	-8.4	-5.5	-2.3	-0.7	4.6	9.9	12.5	14.7	17.6	20.4	23.0
80	59026	-10.8	-8.8	-6.6	-4.3	-2.0	-0.6	3.6	7.8	9.6	11.5	13.8	16.0	18.0
70	61729	-10.4	-8.7	-6.8	-4.9	-3.4	-1.7	1.9	5.5	7.2	8.7	10.6	12.5	14.2

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 92. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: September
 NO. OBSERVATIONS -- SURFACE = 264, T.C.P. = 225

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	2.2A			5.0			10.0			15.87			25.0			SCALAR WIND SPEED (KNOTS)		
		-250	0	+250	-150	0	+150	-50	0	+50	-150	0	+150	-50	0	+50	-250	99.0	
SFC	13	0	0	0	0	0	0	2.0	3.4	6.2	9.0	10.4	11.6	13.1	14.6	16.0			
1000	358	0	0	0	0	0	0	2.4	5.5	8.6	10.1	11.4	13.0	14.7	16.2				
950	1811	0	0	0	0	0	0	2.1	6.1	10.1	12.1	13.8	15.9	18.1	20.1				
900	3337	0	0	0	0	0	0	2.5	7.4	12.0	14.3	16.2	18.7	21.2	23.5				
850	4951	0	0	0	0	0	0	2.7	5.1	9.9	14.7	17.1	19.1	21.7	24.3	26.7			
800	6647	0	0	0	0	0	0	2.9	4.9	7.2	11.9	16.6	18.9	20.9	23.4	26.2			
750	8438	0	0	0	0	0	0	3.6	6.0	8.6	13.8	19.0	21.6	23.8	26.6	32.0			
700	10322	0	0	0	0	0	0	4.1	6.6	9.6	15.7	21.8	24.8	27.3	30.6	33.9			
650	12323	0	0	0	0	0	0	4.3	7.2	10.6	17.5	24.4	27.8	30.7	34.4	36.9			
600	14449	0	0	0	0	0	0	4.4	7.5	11.2	18.6	26.0	29.7	32.8	36.8	40.8			
550	16726	0	0	0	0	0	0	4.9	5.2	6.6	12.6	20.6	28.6	32.6	36.0	44.5			
500	19173	0	0	0	0	0	0	5.7	9.5	13.9	22.9	31.9	36.3	40.1	44.6	48.6			
450	21631	0	0	0	0	0	0	6.5	10.6	15.5	25.3	35.1	40.0	44.1	49.4	59.6			
400	24718	0	0	0	0	0	0	3.4	9.2	13.7	19.0	29.4	40.6	45.9	50.4	62.0			
350	27894	0	0	0	0	0	0	3.6	10.2	15.4	21.5	33.9	46.3	52.4	57.6	67.3			
300	31440	0	0	0	0	0	0	4.8	12.4	18.4	25.4	19.7	54.0	61.0	67.0	77.0			
250	35531	0	0	0	0	0	0	6.2	14.7	21.4	29.3	45.2	61.1	69.0	75.7	82.3			
200	40331	0	0	0	0	0	0	3.3	6.8	17.2	23.8	31.6	47.3	62.0	70.8	82.3			
175	43117	0	0	0	0	0	0	2.0	9.7	17.5	23.5	30.6	45.0	59.4	66.5	72.5			
150	46266	0	0	0	0	0	0	6.2	13.5	18.6	25.0	38.0	51.0	57.4	62.6	69.6			
125	49921	0	0	0	0	0	0	5.3	10.7	14.8	19.7	29.6	39.5	44.4	48.5	53.9			
100	54344	0	0	0	0	0	0	1.5	4.9	7.6	10.8	1.2	23.6	26.8	29.5	32.9			
80	58780	0	0	0	0	0	0	3.0	4.7	6.6	10.6	14.6	16.5	18.2	20.3	39.6			
70	61463	0	0	0	0	0	0	4.4	2.4	3.9	5.7	9.3	12.9	14.7	16.2	22.4			
																	24.3		
																	21.9		

Table 93. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: September

NO. OBSERVATIONS -- SURFACE = 264. TOP = 225

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	ZONAL			WIND SPEED (KNOTS)			99.0				
		1.0	2.7A -250	5.0	10.0	15.87 -150	25.0	MEAN	75.0	94.13 +150	90.0	97.73 +250
SFC	13	-10.9	-9.2	-7.3	-5.4	-3.9	-2.2	1.4	5.0	6.7	8.2	10.1
1000	358	-11.0	-9.3	-7.5	-5.6	-4.2	-2.5	0.9	4.3	6.0	7.4	9.3
950	1811	-16.3	-14.3	-12.1	-10.0	-8.3	-6.3	-2.3	1.7	3.7	5.4	7.5
900	3317	-21.4	-18.9	-16.1	-13.4	-11.2	-8.7	-3.5	1.7	4.2	6.4	8.1
850	4941	-25.8	-22.5	-18.9	-15.3	-12.5	-9.2	-2.5	0.2	7.5	10.3	13.9
900	6647	-27.0	-23.3	-19.3	-15.3	-12.2	-8.5	-1.1	6.3	10.0	13.1	17.1
750	6818	-29.0	-24.9	-20.4	-16.0	-12.5	-8.4	-0.1	8.2	12.3	15.6	20.2
700	10322	-30.0	-25.5	-20.6	-15.8	-12.0	-7.5	1.5	10.5	15.0	18.6	23.6
650	12123	-31.1	-26.2	-20.9	-15.5	-11.4	-6.5	3.4	13.3	16.2	22.3	27.7
600	14447	-30.8	-25.7	-20.2	-14.6	-10.3	-5.2	5.1	15.4	20.5	24.8	33.0
550	16126	-32.0	-26.5	-20.7	-14.5	-10.8	-5.3	6.9	18.1	23.6	28.3	40.3
500	19113	-34.4	-28.3	-21.3	-15.1	-11.9	-7.8	3.8	8.5	20.1	26.9	32.1
450	24811	-34.9	-28.4	-21.3	-14.2	-10.7	-7.2	11.0	24.2	30.7	36.2	45.3
400	24714	-37.3	-30.0	-22.0	-14.1	-10.9	-7.9	-0.6	14.2	21.5	32.3	42.5
350	27614	-41.4	-33.1	-24.0	-15.9	-12.3	-8.4	17.3	34.2	42.5	50.4	65.7
300	31440	-44.3	-34.9	-24.6	-14.3	-10.3	-6.3	3.1	22.3	41.5	50.9	68.9
250	35531	-41.9	-31.9	-21.0	-10.1	-1.6	9.4	28.7	49.0	59.0	67.5	89.3
200	40311	-32.8	-23.4	-13.1	-2.8	5.1	16.6	33.8	53.0	62.6	70.4	80.7
175	43117	-25.4	-17.0	-7.9	1.3	8.1	16.8	43.8	50.6	59.2	66.3	75.5
150	46226	-21.0	-13.8	-6.0	1.9	8.0	15.2	29.8	51.6	57.7	65.6	73.4
125	49921	-17.7	-12.1	-5.9	0.2	5.0	10.6	22.1	33.6	39.2	44.0	50.1
100	54344	-19.6	-15.5	-11.0	-6.5	-3.0	1.1	9.5	17.9	22.0	25.5	30.0
80	58740	-19.5	-16.5	-13.3	-10.0	-7.5	-4.5	1.5	7.5	16.3	19.5	24.5
70	61453	-20.9	-18.3	-15.5	-12.6	-10.4	-7.8	-2.5	2.8	5.4	7.6	10.5

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 94. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: September
NO. OBSERVATIONS -- SURFACE = 264. TOP = 225

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (FEET/SEC.)						97.5% +250
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	
SFC	13	-12.5	-10.8	-9.0	-7.1	-5.7	-4.0	-0.6
1000	358	-11.8	-10.7	-8.4	-6.7	-5.3	-3.7	-0.4
950	1811	-13.2	-11.4	-9.4	-7.4	-5.8	-4.0	-0.2
900	3337	-13.9	-11.9	-9.8	-7.8	-6.2	-4.3	-0.5
850	4951	-14.9	-12.8	-10.5	-8.2	-6.4	-4.3	-0.7
800	6647	-17.1	-14.5	-11.6	-8.7	-6.7	-4.9	-1.5
750	8438	-19.6	-16.6	-13.1	-9.7	-7.0	-3.8	-2.6
700	10322	-24.5	-20.6	-16.4	-12.2	-8.9	-5.0	-2.8
650	12323	-21.1	-23.7	-18.9	-14.2	-10.5	-6.1	-2.7
600	16449	-30.4	-25.7	-20.6	-15.5	-11.5	-7.7	-3.5
550	16726	-32.4	-27.4	-21.9	-16.4	-12.1	-7.1	-3.2
500	16173	-30.5	-24.5	-18.4	-13.7	-8.2	-3.1	-1.4
450	21831	-39.6	-33.5	-26.8	-20.2	-15.0	-8.9	-3.5
400	24718	-55.7	-38.7	-31.1	-23.4	-17.5	-10.5	-3.7
350	27894	-49.1	-41.5	-33.2	-24.9	-18.4	-10.8	-4.7
300	31460	-56.4	-45.8	-36.4	-27.1	-19.4	-11.2	-6.2
250	35531	-57.7	-48.4	-38.2	-28.0	-20.1	-10.8	-8.2
200	40331	-53.1	-44.2	-36.4	-24.7	-17.1	-8.2	-10.0
175	43117	-47.6	-39.7	-30.8	-22.0	-15.1	-7.0	-1.5
150	46266	-59.2	-32.4	-24.9	-17.5	-11.7	-4.9	-9.0
125	49921	-32.4	-26.9	-20.9	-14.9	-10.3	-4.8	-6.3
100	54344	-25.4	-21.5	-17.3	-13.1	-9.8	-5.9	-1.9
80	58740	-17.7	-15.1	-12.2	-9.3	-7.1	-4.5	-0.9
70	61463	-16.7	-14.4	-11.9	-9.4	-7.5	-5.2	-0.6

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 96. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: October

NO. OBSERVATIONS -- SURFACE = 2840 TMP = 240

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	SCALAR WIND SPEED (KNOTS)										
		1.0 2.250	5.0 -250	10.0 -150	15.0 -150	25.0 -150	50.0 -150	75.0 -150	90.0 -150	95.0 -150	97.5 -150	99.0 -150
SFC	13	0	0	0	1.1	3.1	7.2	11.3	12.3	15.0	17.2	19.4
1000	430	0	0	0	1	2.2	6.4	10.6	12.7	14.5	16.7	19.0
950	1877	0	0	0	0	2.5	7.9	13.3	15.9	18.1	21.0	23.9
900	3396	0	0	0	0	3.3	8.3	13.3	15.8	17.9	20.6	23.3
850	4987	0	0	0	0	5.2	9.7	14.2	16.3	18.3	20.7	23.1
800	6663	0	0	0	0	7.0	11.5	16.1	18.3	20.2	22.7	25.1
750	8435	0	0	0	0	8.5	13.3	18.5	21.1	23.3	26.1	28.9
700	10299	0	0	0	0	9.4	14.6	20.4	23.2	25.6	28.6	31.5
650	12283	0	0	0	0	10.3	16.6	22.9	26.0	28.6	32.0	34.4
600	14393	0	0	0	0	10.8	17.8	24.8	28.2	31.1	34.9	38.5
550	16647	0	0	0	0	11.7	17.4	24.8	28.2	31.1	34.9	38.6
500	19075	0	0	0	0	12.1	19.0	27.7	31.6	34.9	39.1	42.0
450	21709	0	0	0	0	12.5	19.9	29.9	33.9	37.3	41.6	45.9
400	24579	0	0	0	0	13.0	20.3	29.4	34.5	39.3	43.4	48.6
350	27713	0	0	0	0	13.5	16.7	27.4	38.1	43.3	47.8	53.5
300	31247	0	0	0	0	14.7	12.7	18.9	31.5	44.1	50.3	55.6
250	35279	0	0	0	0	14.3	21.4	15.7	50.0	57.1	63.1	69.1
200	40023	0	0	0	0	14.9	23.1	19.7	54.1	61.7	68.1	75.3
175	42792	0	0	0	0	14.5	22.0	21.2	52.4	59.9	66.3	74.4
150	45935	0	0	0	0	14.7	21.4	15.0	48.6	55.3	61.0	68.3
125	49600	0	0	0	0	13.3	16.9	10.2	41.5	47.1	51.8	57.9
100	54026	0	0	0	0	9.9	13.3	22.3	31.3	35.7	39.5	44.3
70	58442	0	0	0	0	5.1	6.8	15.2	21.6	24.7	27.4	34.2
	61116	0	0	0	0	3.0	5.7	7.2	10.4	21.2	23.6	29.6

Table 96. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: October
NO. OBSERVATIONS -- SURFACE = 284, TOP = 240

PRESSURE LEVEL (IMBS)	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)			WIND SPEED (KNOTS)			WIND SPEED (KNOTS)						
		1.0	2.28	5.0	10.0	15.87	25.0	50.0	75.0	A6.13	90.0	95.0	97.73	99.0
SFC	13	-15.4	-13.2	-10.8	-8.4	-6.5	-4.3	.2	4.7	6.9	8.8	11.2	13.6	15.8
1000	420	-16.1	-14.0	-11.7	-9.3	-7.5	-5.4	-1.6	3.4	5.5	7.3	9.7	12.0	14.1
950	1877	-23.0	-20.2	-17.2	-14.2	-11.8	-9.0	-3.4	2.2	5.0	7.4	10.4	13.4	16.2
900	3306	-23.8	-20.9	-17.7	-14.6	-12.1	-9.2	-3.3	2.6	5.5	8.0	11.1	14.3	17.2
850	4997	-23.8	-20.7	-17.3	-13.9	-11.3	-8.2	-1.9	4.4	7.5	10.1	13.5	16.9	20.0
800	6663	-24.6	-21.2	-17.5	-13.9	-11.0	-7.6	-0.8	6.0	9.4	12.3	15.9	19.6	23.0
750	8315	-25.8	-22.1	-18.0	-14.0	-10.8	-7.1	.5	6.1	9.4	12.3	15.9	19.6	23.0
700	10249	-26.5	-22.4	-18.0	-13.5	-10.1	-6.0	2.2	10.4	14.5	17.9	22.4	26.8	30.9
650	12233	-28.6	-24.1	-19.2	-14.2	-10.4	-5.9	3.3	12.5	17.0	20.6	25.8	30.7	35.2
600	14393	-28.5	-23.7	-18.4	-13.2	-9.1	-4.3	5.5	15.3	20.1	24.2	29.4	34.7	39.5
550	16647	-29.9	-24.6	-18.8	-13.1	-8.6	-3.3	7.4	18.1	23.4	27.9	33.6	39.4	44.7
500	19015	-30.9	-25.3	-19.1	-13.0	-8.2	-2.6	8.9	20.4	26.0	30.8	36.9	43.1	48.7
450	21779	-33.8	-27.5	-20.6	-13.7	-8.3	-2.0	10.9	23.8	30.1	35.5	42.4	49.3	55.6
400	24570	-35.7	-28.8	-21.3	-13.8	-7.9	-1.0	13.0	27.0	33.9	47.3	54.8	61.7	68.1
350	27733	-39.8	-31.9	-23.3	-14.7	-8.0	-0.1	15.9	31.9	39.8	46.5	55.1	63.7	71.6
300	31227	-45.5	-36.4	-26.4	-16.5	-8.7	.4	19.0	37.6	46.7	54.5	64.4	74.4	83.5
250	35229	-44.9	-35.3	-24.8	-14.3	-6.2	3.4	22.9	42.4	52.0	60.1	70.6	81.1	90.7
200	40023	-42.2	-32.5	-21.9	-11.3	-3.0	6.7	26.5	46.3	56.0	64.3	74.9	85.5	95.2
175	42792	-35.4	-26.6	-17.0	-7.3	.2	9.0	27.0	45.0	53.8	61.3	71.0	80.6	89.4
150	45935	-29.1	-21.2	-12.6	-4.1	2.6	10.5	26.4	42.3	50.2	56.9	65.4	74.0	81.9
125	49000	-23.4	-16.9	-9.8	-2.7	2.8	9.3	22.5	35.7	42.2	47.7	54.8	61.9	68.4
100	54026	-19.1	-14.1	-8.6	-3.1	1.2	6.2	16.5	26.8	31.8	36.7	44.1	47.1	52.1
80	58442	-17.7	-13.9	-9.7	-5.5	-2.3	1.5	9.3	17.1	20.9	24.1	28.3	32.5	36.3
70	61106	-20.6	-16.9	-12.9	-8.8	-5.7	-2.0	5.5	13.0	16.7	19.8	23.9	27.9	31.6

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 98. Cumulative Frequency Distribution of Upper Wind (Sealer) at Standard Pressure Levels for Point Mugu, California: November

PRESSURE LEVEL (IMBS)	SCALAR WIND SPEED (INCHES)													
	MEAN HEIGHT (FT)	1.0 -250	2.2A -250	5.0 -150	10.0 -150	15.0B7 -150	25.0C -150	50.0 MEAN	75.0 MEAN	10.0 MEAN	13.5 +150	17.2 +150	95.0 +250	97.73 +250
SFC	1.3	0	0	0	0.3	1.9	3.8	7.7	11.6	13.5	15.1	17.2	19.3	21.2
1000	492	0	0	0	1.1	3.6	8.7	13.8	16.3	16.4	21.2	23.9	26.4	26.4
950	1926	0	0	0	1.6	4.6	10.6	16.6	19.6	22.1	25.4	28.0	31.6	31.6
900	3425	0	0	0	2.9	5.3	10.3	15.3	17.7	19.7	22.4	25.1	27.5	27.5
850	4917	0	0	0	4.7	6.8	11.0	15.2	17.3	19.1	21.3	23.6	25.7	25.7
800	6650	0	0	0	6.2	8.6	13.6	18.6	21.0	23.1	25.7	28.1	30.6	30.6
750	8396	0	0	0	7.5	10.4	16.2	22.0	24.9	27.3	30.5	33.6	36.5	36.5
700	10236	0	0	0	8.8	11.1	18.0	25.9	28.3	31.2	34.9	38.6	42.0	42.0
650	12142	0	0	0	5.7	9.0	12.9	20.8	26.7	32.6	35.9	40.2	44.4	48.3
600	14272	0	0	0	6.2	10.1	14.7	23.9	33.1	37.7	41.6	46.6	51.5	56.1
550	16496	0	0	0	1.1	6.8	11.3	16.5	27.2	31.9	43.1	47.6	53.3	59.0
500	18618	0	0	0	2.1	8.4	13.2	18.9	30.5	42.1	47.8	52.6	58.9	65.1
450	21490	0	0	0	2.9	9.7	14.9	21.1	33.6	46.1	52.2	57.5	64.1	70.8
400	26118	0	0	0	1.8	9.7	15.6	23.0	37.6	52.2	59.4	65.5	73.4	77.7
350	32385	0	0	0	4.2	12.5	18.9	26.5	41.9	57.3	64.9	71.3	79.6	86.4
300	38673	0	0	0	6.6	15.8	22.9	31.3	48.3	65.3	73.7	80.8	87.9	95.5
250	38656	0	0	0	6.4	16.2	23.8	32.8	51.0	69.2	78.2	85.7	95.6	107.5
200	39567	0	0	0	6.8	16.4	23.8	32.5	50.3	68.1	76.8	84.2	93.8	105.4
175	42326	0	0	0	7.0	16.2	23.3	31.7	48.8	65.9	74.3	81.1	90.6	105.4
150	45669	0	0	0	6.1	14.4	20.9	28.5	44.0	59.5	67.1	73.6	81.9	90.2
125	49147	0	0	0	5.8	12.7	18.1	24.4	37.3	50.2	56.5	61.9	68.8	82.0
100	53796	0	0	0	2.7	8.1	12.4	17.4	27.6	37.6	47.1	52.5	58.0	64.3
80	58041	0	0	0	1.0	4.9	8.0	11.6	18.9	26.2	32.9	36.8	40.7	44.3
70	60709	0	0	0	2.1	5.3	7.7	10.6	16.4	22.2	27.5	30.7	33.8	36.7

Table 99. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: November

NO. OBSERVATIONS -- SURFACE = 236. TNP = 197

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	2.5%			5.0%			10.0%			15.0%			20.0%			ZONAL WIND SPEED (KNOTS)		
		1.0	2.5%	+25%	5.0	10.0	15.0	20.0	-15%	50.0	75.0	90.0	95.0	97.5	99.0	MEAN	90.0	95.0	
SFC	13	-17.3	-15.1	-12.7	-10.3	-8.4	-6.2	-4.2	-1.7	2.0	5.0	9.3	9.3	11.7	13.9				
1000	492	-21.7	-19.0	-16.1	-13.2	-10.9	-8.2	-6.2	-2.8	2.6	5.3	7.6	10.5	13.4	16.1				
950	1926	-27.9	-24.4	-20.7	-16.9	-14.0	-10.6	-8.6	-3.6	3.4	6.8	9.7	13.5	17.2	20.6				
900	3425	-25.3	-22.1	-18.6	-15.2	-12.5	-9.3	-6.3	-2.3	3.5	6.7	9.4	12.6	16.3	19.5				
850	4997	-22.3	-19.3	-16.0	-12.7	-10.1	-7.1	-5.9	-0.9	5.3	8.3	10.9	14.2	17.5	20.5				
800	6650	-21.5	-18.2	-14.6	-11.0	-8.2	-6.2	-4.9	-1.5	8.5	11.8	14.6	18.2	21.8	25.1				
750	8396	-21.7	-18.0	-14.9	-11.9	-9.9	-7.7	-5.0	-4.4	12.5	15.9	19.1	23.1	27.2	30.4				
700	10276	-22.4	-18.3	-15.8	-13.8	-10.2	-7.5	-5.7	-1.5	6.9	15.3	19.5	23.0	27.6	32.1				
650	12192	-25.0	-20.1	-14.8	-9.5	-5.5	-1.5	-0.5	9.3	19.1	24.0	28.1	33.4	38.7	43.6				
600	14272	-27.4	-21.9	-15.9	-12.8	-8.8	-5.1	-1.4	11.7	23.0	28.5	33.2	36.3	45.3	50.6				
550	16496	-30.1	-24.3	-17.3	-10.3	-4.9	-1.5	1.5	14.5	27.5	33.9	39.3	46.3	53.3	59.7				
500	18848	-32.3	-25.3	-17.7	-10.1	-4.2	-2.8	16.9	31.0	36.0	43.9	51.5	59.1	66.1					
450	21490	-33.0	-25.6	-17.3	-9.5	-3.2	-4.2	19.2	34.7	41.6	47.9	55.9	64.0	71.4					
400	24318	-26.3	-28.0	-19.0	-10.0	-3.0	-3.0	5.3	22.0	38.8	47.0	63.0	72.0	80.3					
350	27345	-36.6	-27.9	-18.4	-8.8	-1.4	7.3	25.1	42.9	51.6	59.0	68.6	78.1	85.8					
300	30873	-40.7	-30.8	-20.0	-9.2	-0.8	9.1	29.2	49.3	59.2	67.6	78.4	84.2	99.1					
250	34856	-39.9	-29.6	-18.4	-7.2	1.5	11.6	32.6	53.4	63.7	72.4	83.6	94.8	105.1					
200	39567	-35.0	-25.2	-16.5	-3.8	4.5	14.3	34.2	54.1	63.9	72.2	82.9	93.6	103.4					
175	42376	-31.8	-22.5	-12.3	-2.1	5.8	15.1	34.1	53.1	62.4	70.3	80.5	90.7	100.6					
150	45469	-30.2	-21.3	-11.6	-1.9	5.4	14.5	32.5	50.5	60.4	66.9	74.6	86.3	95.2					
125	49147	-23.0	-15.7	-7.8	-1.1	6.3	13.6	28.3	43.0	56.3	56.5	64.4	72.3	79.6					
100	53576	-18.6	-13.7	-7.0	-0.9	3.9	9.5	21.0	32.5	38.1	42.9	49.0	55.2	60.6					
80	58041	-17.3	-12.9	-8.1	-3.3	-1.4	6.8	13.7	22.6	30.7	35.5	40.3	44.7						
70	60749	-17.7	-13.7	-9.3	-5.0	-1.6	2.4	10.5	18.6	22.6	26.0	30.3	36.7	38.7					

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 100. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: November
NO. OBSERVATIONS -- SURFACE = 236. TOP = 197

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)										
		1.0	2.25	5.0	10.0	15.0	25.0	50.0	75.0	90.0	95.0	
SFC	13	-17.0	-14.9	-12.6	-10.3	-6.5	-2.1	2.2	4.3	6.1	8.4	10.7
1000	492	-19.8	-17.4	-14.8	-12.1	-10.1	-7.7	-2.8	2.1	4.5	6.5	9.2
950	1926	-21.5	-18.9	-16.0	-13.1	-10.9	-8.3	-2.9	2.5	5.1	7.3	10.2
900	3425	-19.6	-17.1	-14.6	-11.6	-9.5	-7.0	-1.9	3.2	5.7	7.8	10.6
850	4997	-21.2	-18.4	-15.3	-12.3	-9.9	-7.1	-1.4	4.3	7.1	9.5	12.5
800	6650	-28.6	-24.8	-20.7	-16.6	-13.4	-9.6	-2.0	5.6	9.4	12.6	15.6
750	8396	-34.3	-29.9	-25.1	-20.3	-16.5	-12.1	-3.1	5.9	10.3	14.1	16.7
700	10236	-37.2	-33.4	-27.1	-21.9	-17.8	-13.0	-3.2	6.6	11.4	15.5	20.7
650	12192	-41.0	-34.7	-29.9	-24.0	-19.5	-14.2	-3.3	7.6	12.9	17.4	23.7
600	14272	-45.5	-39.5	-32.9	-26.3	-21.2	-15.2	-2.9	9.4	15.4	20.5	29.1
550	16496	-49.5	-43.0	-35.8	-28.6	-23.0	-16.4	-3.0	10.4	17.0	22.6	33.7
500	18898	-54.2	-46.9	-38.9	-31.0	-24.6	-17.5	-2.7	12.1	19.4	25.6	37.0
450	21490	-59.4	-51.3	-42.4	-33.6	-26.7	-18.6	-2.1	14.4	22.5	29.6	41.5
400	24318	-66.9	-57.6	-47.7	-31.6	-29.8	-20.6	-1.9	16.8	26.0	33.8	48.8
350	27395	-73.6	-63.4	-52.3	-41.2	-32.5	-22.3	-1.6	19.1	29.3	36.0	55.2
300	30973	-83.3	-71.7	-59.1	-46.4	-36.6	-25.0	-1.5	22.0	33.6	43.4	60.2
250	34856	-86.5	-74.7	-61.7	-48.6	-38.5	-26.6	-2.3	33.9	44.0	57.1	70.1
200	39567	-82.1	-70.8	-58.5	-46.1	-36.5	-25.2	-2.2	20.8	32.1	41.7	66.4
175	42326	-77.3	-66.5	-54.7	-43.0	-33.8	-23.0	-1.1	20.8	31.6	40.8	52.5
150	45469	-61.5	-52.8	-43.3	-33.9	-26.5	-17.8	-0.2	17.4	26.1	33.5	52.4
125	49147	-51.3	-44.1	-36.2	-28.3	-22.2	-15.0	-0.3	14.4	21.6	27.7	43.5
100	53596	-38.4	-33.1	-27.3	-21.5	-17.0	-11.7	-0.9	9.9	15.2	25.6	50.7
80	58041	-25.7	-22.2	-18.4	-14.6	-11.6	-8.1	-1.0	6.1	9.6	12.6	23.7
70	60719	-22.4	-19.3	-16.0	-12.6	-10.0	-6.9	-0.7	5.5	8.6	11.2	17.9

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

Table 101. Cumulative Frequency Distribution of Upper Winds (Scalar) at Standard Pressure Levels for Point Mugu, California: December

NO. OBSERVATIONS -- SURFACE = 332. TOP = 235

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	SCALAR WIND SPEED (INOTS)						MEAN +1SD +2SD	MEAN -1SD -2SD
		1.0	2.0	5.0	10.0	15.0	25.0		
SFC	13	0	0	0	0	0	0	9.4	14.0
1000	439	0	0	0	0	0	0	16.2	20.4
950	1913	0	0	0	0	0	0	15.6	20.6
900	3392	0	0	0	0	0	0	16.3	23.5
850	4944	0	0	0	0	0	0	11.9	21.3
800	6578	0	0	0	0	0	0	12.1	21.2
750	8307	0	0	0	0	0	0	12.4	23.7
700	10128	0	0	0	0	0	0	12.9	27.0
650	12067	0	0	0	0	0	0	12.9	27.0
600	14124	0	0	0	0	0	0	12.9	27.0
550	16335	0	0	0	0	0	0	12.9	27.0
500	18714	0	0	0	0	0	0	12.9	27.0
450	21296	0	0	0	0	0	0	12.9	27.0
400	24171	0	0	0	0	0	0	12.9	27.0
350	27145	0	0	0	0	0	0	12.9	27.0
300	30646	0	0	0	0	0	0	12.9	27.0
250	34596	0	0	0	0	0	0	12.9	27.0
200	39269	0	0	0	0	0	0	12.9	27.0
175	42024	0	0	0	0	0	0	12.9	27.0
150	45140	0	0	0	0	0	0	12.9	27.0
125	48875	0	0	0	0	0	0	12.9	27.0
100	53353	0	0	0	0	0	0	12.9	27.0
80	57802	0	0	0	0	0	0	12.9	27.0
70	60459	0	0	0	0	0	0	12.9	27.0

Table 102. Cumulative Frequency Distribution of the Zonal Upper Wind Component at Standard Pressure Levels for Point Mugu, California: December

NO. OBSERVATIONS -- SURFACE = 332. TOP = 235

PRESSURE LEVEL (MB) SFC	MEAN HEIGHT (FT)	ZONAL WIND SPEED (KNOTS)			ZONAL WIND SPEED (KNOTS)			ZONAL WIND SPEED (KNOTS)						
		1.0	2.2A -250	5.0	10.0	15.87 -150	25.0	50.0 MEAN	75.0	115D	90.0	95.0	97.73 +250	99.0
1000	13	-20.5	-17.7	-14.7	-9.3	-6.5	-0.9	4.7	7.5	9.9	12.9	15.9	18.7	
950	499	-24.8	-21.6	-18.1	-14.7	-12.0	-8.8	-2.4	4.0	7.2	9.9	13.3	16.8	20.0
900	1913	-30.1	-26.3	-22.1	-17.9	-14.7	-10.9	-3.1	4.7	6.5	11.7	15.9	20.1	23.9
850	3392	-28.4	-24.5	-20.3	-16.1	-12.8	-8.9	-1.1	6.7	10.6	13.9	18.1	22.3	26.2
800	4944	-25.5	-21.7	-17.5	-13.3	-10.1	-6.3	1.5	9.3	13.1	16.3	20.5	24.7	28.5
750	6578	-24.7	-20.5	-15.9	-11.4	-7.8	-3.6	4.9	13.4	17.6	21.2	25.7	30.3	34.5
700	8307	-24.6	-19.9	-14.8	-9.7	-5.7	-1.0	8.5	18.0	22.7	26.7	31.8	36.9	41.6
650	10128	-24.7	-19.6	-14.1	-8.5	-4.2	.9	11.2	21.5	26.6	30.9	36.5	42.0	47.1
600	12067	-25.8	-26.1	-13.9	-7.6	-2.6	2.9	14.5	26.1	31.8	36.6	42.9	49.1	54.8
550	14124	-29.0	-22.5	-11.4	-8.4	-2.9	3.6	16.7	29.8	36.3	41.8	48.8	55.9	62.4
500	16335	-29.4	-22.4	-14.8	-7.2	-1.3	5.7	19.8	33.9	40.9	46.8	54.4	62.0	69.0
450	18714	-31.5	-23.7	-15.2	-6.8	-0.2	7.6	23.3	39.0	46.8	53.4	61.8	70.3	70.1
400	21296	-35.2	-26.6	-1.2	-7.8	-0.5	8.1	25.6	43.1	51.7	59.0	68.4	77.8	86.4
350	24101	-41.1	-31.2	-20.4	-9.7	-1.3	6.6	48.6	58.5	66.9	77.6	88.4	98.3	106.0
300	27145	-43.2	-32.6	-21.1	-9.6	-0.6	10.0	51.4	52.8	63.4	72.4	83.9	95.4	110.4
250	30646	-41.4	-30.8	-19.1	-7.3	1.8	12.6	34.4	56.2	76.1	87.9	99.6	104.0	114.7
200	34596	-36.3	-25.6	-13.9	-2.3	6.8	17.5	39.2	60.9	71.6	80.7	92.3	100.0	110.8
175	39268	-28.6	-19.7	-12.9	-2.8	11.2	21.1	41.1	61.1	71.0	79.4	90.1	100.9	103.7
150	42024	-22.1	-13.2	-3.5	6.2	13.8	22.7	40.8	58.9	67.8	75.4	85.1	94.8	92.0
125	45190	-15.2	-7.6	.7	9.0	15.4	23.0	38.4	53.8	61.4	67.8	76.1	84.4	82.0
100	48875	-11.2	-4.8	2.2	9.2	14.6	21.0	34.0	47.0	53.4	58.8	65.8	72.8	79.2
80	53353	-11.1	-5.8	-0.0	5.8	10.3	15.6	26.4	37.2	42.5	47.0	52.8	58.6	63.9
70	57802	-12.5	-8.0	-3.1	1.7	5.5	10.0	19.0	28.0	32.5	36.3	41.1	46.0	50.5
	60469	-10.7	-7.1	-3.2	.7	3.7	7.3	14.5	21.7	25.3	28.3	32.2	36.1	39.7

NOTE -- POSITIVE COMPONENTS ARE FROM THE WEST.

Table 103. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: December

NO. OBSERVATIONS -- SURFACE = 332, TOP = 235

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	MERIDIONAL WIND SPEED (KNOTS)						99.0 +250
1.0 -2.2a -250	5.0 -10.0 -150	10.0 -15.0	15.0 -20.0	25.0 -30.0	MEAN -3.0 -7.5 -13.0 -18.0 -22.5 -27.0 -31.5 -36.0 -40.5 -45.0 -49.5 -54.0 -58.5 -63.0 -67.5 -72.0 -76.5 -81.0 -85.5 -90.0 -94.5 -99.0 -103.5 -108.0 -112.5 -117.0 -121.5 -126.0 -130.5 -135.0 -139.5 -144.0 -148.5 -153.0 -157.5 -162.0 -166.5 -171.0 -175.5 -180.0 -184.5 -189.0 -193.5 -198.0 -202.5 -207.0 -211.5 -216.0 -220.5 -225.0 -229.5 -234.0 -238.5 -243.0 -247.5 -252.0 -256.5 -261.0 -265.5 -270.0 -274.5 -279.0 -283.5 -288.0 -292.5 -297.0 -301.5 -306.0 -310.5 -315.0 -319.5 -324.0 -328.5 -333.0 -337.5 -342.0 -346.5 -351.0 -355.5 -360.0 -364.5 -369.0 -373.5 -378.0 -382.5 -387.0 -391.5 -396.0 -400.5 -405.0 -409.5 -414.0 -418.5 -423.0 -427.5 -432.0 -436.5 -441.0 -445.5 -450.0 -454.5 -459.0 -463.5 -468.0 -472.5 -477.0 -481.5 -486.0 -490.5 -495.0 -500.0 -504.5 -509.0 -513.5 -518.0 -522.5 -527.0 -531.5 -536.0 -540.5 -545.0 -549.5 -554.0 -558.5 -563.0 -567.5 -572.0 -576.5 -581.0 -585.5 -589.0 -593.5 -598.0 -602.5 -607.0 -611.5 -616.0 -620.5 -625.0 -629.5 -634.0 -638.5 -643.0 -647.5 -652.0 -656.5 -661.0 -665.5 -670.0 -674.5 -679.0 -683.5 -688.0 -692.5 -697.0 -701.5 -706.0 -710.5 -715.0 -719.5 -724.0 -728.5 -733.0 -737.5 -742.0 -746.5 -751.0 -755.5 -760.0 -764.5 -769.0 -773.5 -778.0 -782.5 -787.0 -791.5 -796.0 -800.5 -805.0 -809.5 -814.0 -818.5 -823.0 -827.5 -832.0 -836.5 -841.0 -845.5 -850.0 -854.5 -859.0 -863.5 -868.0 -872.5 -877.0 -881.5 -886.0 -890.5 -895.0 -900.0 -904.5 -909.0 -913.5 -918.0 -922.5 -927.0 -931.5 -936.0 -940.5 -945.0 -949.5 -954.0 -958.5 -963.0 -967.5 -972.0 -976.5 -981.0 -985.5 -989.0 -993.5 -998.0 -1002.5 -1007.0 -1011.5 -1016.0 -1020.5 -1025.0 -1029.5 -1034.0 -1038.5 -1043.0 -1047.5 -1052.0 -1056.5 -1061.0 -1065.5 -1070.0 -1074.5 -1079.0 -1083.5 -1088.0 -1092.5 -1097.0 -1101.5 -1106.0 -1110.5 -1115.0 -1119.5 -1124.0 -1128.5 -1133.0 -1137.5 -1142.0 -1146.5 -1151.0 -1155.5 -1160.0 -1164.5 -1169.0 -1173.5 -1178.0 -1182.5 -1187.0 -1191.5 -1196.0 -1200.5 -1205.0 -1209.5 -1214.0 -1218.5 -1223.0 -1227.5 -1232.0 -1236.5 -1241.0 -1245.5 -1250.0 -1254.5 -1259.0 -1263.5 -1268.0 -1272.5 -1277.0 -1281.5 -1286.0 -1290.5 -1295.0 -1300.5 -1305.0 -1309.5 -1314.0 -1318.5 -1323.0 -1327.5 -1332.0 -1336.5 -1341.0 -1345.5 -1350.0 -1354.5 -1359.0 -1363.5 -1368.0 -1372.5 -1377.0 -1381.5 -1386.0 -1390.5 -1395.0 -1400.5 -1405.0 -1409.5 -1414.0 -1418.5 -1423.0 -1427.5 -1432.0 -1436.5 -1441.0 -1445.5 -1450.0 -1454.5 -1459.0 -1463.5 -1468.0 -1472.5 -1477.0 -1481.5 -1486.0 -1490.5 -1495.0 -1500.5 -1505.0 -1509.5 -1514.0 -1518.5 -1523.0 -1527.5 -1532.0 -1536.5 -1541.0 -1545.5 -1550.0 -1554.5 -1559.0 -1563.5 -1568.0 -1572.5 -1577.0 -1581.5 -1586.0 -1590.5 -1595.0 -1600.5 -1605.0 -1609.5 -1614.0 -1618.5 -1623.0 -1627.5 -1632.0 -1636.5 -1641.0 -1645.5 -1650.0 -1654.5 -1659.0 -1663.5 -1668.0 -1672.5 -1677.0 -1681.5 -1686.0 -1690.5 -1695.0 -1700.5 -1705.0 -1709.5 -1714.0 -1718.5 -1723.0 -1727.5 -1732.0 -1736.5 -1741.0 -1745.5 -1750.0 -1754.5 -1759.0 -1763.5 -1768.0 -1772.5 -1777.0 -1781.5 -1786.0 -1790.5 -1795.0 -1800.5 -1805.0 -1809.5 -1814.0 -1818.5 -1823.0 -1827.5 -1832.0 -1836.5 -1841.0 -1845.5 -1850.0 -1854.5 -1859.0 -1863.5 -1868.0 -1872.5 -1877.0 -1881.5 -1886.0 -1890.5 -1895.0 -1900.5 -1905.0 -1909.5 -1914.0 -1918.5 -1923.0 -1927.5 -1932.0 -1936.5 -1941.0 -1945.5 -1950.0 -1954.5 -1959.0 -1963.5 -1968.0 -1972.5 -1977.0 -1981.5 -1986.0 -1990.5 -1995.0 -2000.5 -2005.0 -2009.5 -2014.0 -2018.5 -2023.0 -2027.5 -2032.0 -2036.5 -2041.0 -2045.5 -2050.0 -2054.5 -2059.0 -2063.5 -2068.0 -2072.5 -2077.0 -2081.5 -2086.0 -2090.5 -2095.0 -2100.5 -2105.0 -2109.5 -2114.0 -2118.5 -2123.0 -2127.5 -2132.0 -2136.5 -2141.0 -2145.5 -2150.0 -2154.5 -2159.0 -2163.5 -2168.0 -2172.5 -2177.0 -2181.5 -2186.0 -2190.5 -2195.0 -2200.5 -2205.0 -2209.5 -2214.0 -2218.5 -2223.0 -2227.5 -2232.0 -2236.5 -2241.0 -2245.5 -2250.0 -2254.5 -2259.0 -2263.5 -2268.0 -2272.5 -2277.0 -2281.5 -2286.0 -2290.5 -2295.0 -2300.5 -2305.0 -2309.5 -2314.0 -2318.5 -2323.0 -2327.5 -2332.0 -2336.5 -2341.0 -2345.5 -2350.0 -2354.5 -2359.0 -2363.5 -2368.0 -2372.5 -2377.0 -2381.5 -2386.0 -2390.5 -2395.0 -2400.5 -2405.0 -2409.5 -2414.0 -2418.5 -2423.0 -2427.5 -2432.0 -2436.5 -2441.0 -2445.5 -2450.0 -2454.5 -2459.0 -2463.5 -2468.0 -2472.5 -2477.0 -2481.5 -2486.0 -2490.5 -2495.0 -2500.5 -2505.0 -2509.5 -2514.0 -2518.5 -2523.0 -2527.5 -2532.0 -2536.5 -2541.0 -2545.5 -2550.0 -2554.5 -2559.0 -2563.5 -2568.0 -2572.5 -2577.0 -2581.5 -2586.0 -2590.5 -2595.0 -2600.5 -2605.0 -2609.5 -2614.0 -2618.5 -2623.0 -2627.5 -2632.0 -2636.5 -2641.0 -2645.5 -2650.0 -2654.5 -2659.0 -2663.5 -2668.0 -2672.5 -2677.0 -2681.5 -2686.0 -2690.5 -2695.0 -2700.5 -2705.0 -2709.5 -2714.0 -2718.5 -2723.0 -2727.5 -2732.0 -2736.5 -2741.0 -2745.5 -2750.0 -2754.5 -2759.0 -2763.5 -2768.0 -2772.5 -2777.0 -2781.5 -2786.0 -2790.5 -2795.0 -2800.5 -2805.0 -2809.5 -2814.0 -2818.5 -2823.0 -2827.5 -2832.0 -2836.5 -2841.0 -2845.5 -2850.0 -2854.5 -2859.0 -2863.5 -2868.0 -2872.5 -2877.0 -2881.5 -2886.0 -2890.5 -2895.0 -2900.5 -2905.0 -2909.5 -2914.0 -2918.5 -2923.0 -2927.5 -2932.0 -2936.5 -2941.0 -2945.5 -2950.0 -2954.5 -2959.0 -2963.5 -2968.0 -2972.5 -2977.0 -2981.5 -2986.0 -2990.5 -2995.0 -3000.5 -3005.0 -3009.5 -3014.0 -3018.5 -3023.0 -3027.5 -3032.0 -3036.5 -3041.0 -3045.5 -3050.0 -3054.5 -3059.0 -3063.5 -3068.0 -3072.5 -3077.0 -3081.5 -3086.0 -3090.5 -3095.0 -3100.5 -3105.0 -3109.5 -3114.0 -3118.5 -3123.0 -3127.5 -3132.0 -3136.5 -3141.0 -3145.5 -3150.0 -3154.5 -3159.0 -3163.5 -3168.0 -3172.5 -3177.0 -3181.5 -3186.0 -3190.5 -3195.0 -3200.5 -3205.0 -3209.5 -3214.0 -3218.5 -3223.0 -3227.5 -3232.0 -3236.5 -3241.0 -3245.5 -3250.0 -3254.5 -3259.0 -3263.5 -3268.0 -3272.5 -3277.0 -3281.5 -3286.0 -3290.5 -3295.0 -3300.5 -3305.0 -3309.5 -3314.0 -3318.5 -3323.0 -3327.5 -3332.0 -3336.5 -3341.0 -3345.5 -3350.0 -3354.5 -3359.0 -3363.5 -3368.0 -3372.5 -3377.0 -3381.5 -3386.0 -3390.5 -3395.0 -3400.5 -3405.0 -3409.5 -3414.0 -3418.5 -3423.0 -3427.5 -3432.0 -3436.5 -3441.0 -3445.5 -3450.0 -3454.5 -3459.0 -3463.5 -3468.0 -3472.5 -3477.0 -3481.5 -3486.0 -3490.5 -3495.0 -3500.5 -3505.0 -3509.5 -3514.0 -3518.5 -3523.0 -3527.5 -3532.0 -3536.5 -3541.0 -3545.5 -3550.0 -3554.5 -3559.0 -3563.5 -3568.0 -3572.5 -3577.0 -3581.5 -3586.0 -3590.5 -3595.0 -3600.5 -3605.0 -3609.5 -3614.0 -3618.5 -3623.0 -3627.5 -3632.0 -3636.5 -3641.0 -3645.5 -3650.0 -3654.5 -3659.0 -3663.5 -3668.0 -3672.5 -3677.0 -3681.5 -3686.0 -3690.5 -3695.0 -3700.5 -3705.0 -3709.5 -3714.0 -3718.5 -3723.0 -3727.5 -3732.0 -3736.5 -3741.0 -3745.5 -3750.0 -3754.5 -3759.0 -3763.5 -3768.0 -3772.5 -3777.0 -3781.5 -3786.0 -3790.5 -3795.0 -3800.5 -3805.0 -3809.5 -3814.0 -3818.5 -3823.0 -3827.5 -3832.0 -3836.5 -3841.0 -3845.5 -3850.0 -3854.5 -3859.0 -3863.5 -3868.0 -3872.5 -3877.0 -3881.5 -3886.0 -3890.5 -3895.0 -3900.5 -3905.0 -3909.5 -3914.0 -3918.5 -3923.0 -3927.5 -3932.0 -3936.5 -3941.0 -3945.5 -3950.0 -3954.5 -3959.0 -3963.5 -3968.0 -3972.5 -3977.0 -3981.5 -3986.0 -3990.5 -3995.0 -4000.5 -4005.0 -4009.5 -4014.0 -4018.5 -4023.0 -4027.5 -4032.0 -4036.5 -4041.0 -4045.5 -4050.0 -4054.5 -4059.0 -4063.5 -4068.0 -4072.5 -4077.0 -4081.5 -4086.0 -4090.5 -4095.0 -4100.5 -4105.0 -4109.5 -4114.0 -4118.5 -4123.0 -4127.5 -4132.0 -4136.5 -4141.0 -4145.5 -4150.0 -4154.5 -4159.0 -4163.5 -4168.0 -4172.5 -4177.0 -4181.5 -4186.0 -4190.5 -4195.0 -4200.5 -4205.0 -4209.5 -4214.0 -4218.5 -4223.0 -4227.5 -4232.0 -4236.5 -4241.0 -4245.5 -4250.0 -4254.5 -4259.0 -4263.5 -4268.0 -4272.5 -4277.0 -4281.5 -4286.0 -4290.5 -4295.0 -4300.5 -4305.0 -4309.5 -4314.0 -4318.5 -4323.0 -4327.5 -4332.0 -4336.5 -4341.0 -4345.5 -4350.0 -4354.5 -4359.0 -4363.5 -4368.0 -4372.5 -4377.0 -4381.5 -4386.0 -4390.5 -4395.0 -4400.5 -4405.0 -4409.5 -4414.0 -4418.5 -4423.0 -4427.5 -4432.0 -4436.5 -4441.0 -4445.5 -4450.0 -4454.5 -4459.0 -4463.5 -4468.0 -4472.5 -4477.0 -4481.5 -4486.0 -4490.5 -4495.0 -4500.5 -4505.0 -4509.5 -4514.0 -4518.5 -4523.0 -4527.5 -4532.0 -4536.5 -4541.0 -4545.5 -4550.0 -4554.5 -4559.0 -4563.5 -4568.0 -4572.5 -4577.0 -4581.5 -4586.0 -4590.5 -4595.0 -4600.5 -4605.0 -4609.5 -4614.0 -4618.5 -4623.0 -4627.5 -4632.0 -4636.5 -4641.0 -4645.5 -4650.0 -4654.5 -4659.0 -4663.5 -4668.0 -4672.5 -4677.0 -4681.5 -4686.0 -4690.5 -4695.0 -4700.5 -4705.0 -4709.5 -4714.0 -4718.5 -4723.0 -4727.5 -4732.0 -4736.5 -4741.0 -4745.5 -4750.0 -4754.5 -4759.0 -4763.5 -4768.0 -4772.5 -4777.0 -4781.5 -4786.0 -4790.5 -4795.0 -4800.5 -4805.0 -4809.5 -4814.0 -4818.5 -4823.0 -4827.5 -4832.0 -4836.5 -4841.0 -4845.5 -4850.0 -4854.5 -4859.0 -4863.5 -4868.0 -4872.5 -4877.0 -4881.5 -4886.0 -4890.5 -4895.0 -4900.5 -4905.0 -4909.5 -4914.0 -4918.5 -4923.0 -4927.5 -4932.0 -4936.5 -4941.0 -4945.5 -4950.0 -4954.5 -4959.0 -4963.5 -4968.0 -4972.5 -4977.0 -4981.5 -4986.0 -4990.5 -4995.0 -5000.5 -5005.0 -5009.5 -5014.0 -5018.5 -5023.0 -5027.5 -5032.0 -5036.5 -5041.0 -5045.5 -5050.0 -5054.5 -5059.0 -5063.5 -5068.0 -5072.5 -5077.0 -5081.5 -5086.0 -5090.5 -5095.0 -5100.5 -5105.0 -5109.5 -5114.0 -5118.5 -5123.0 -5127.5 -5132.0 -5136.5 -5141.0 -5145.5 -5150.0 -5154.5 -5159.0 -5163.5 -5168.0 -5172.5 -5177.0 -5181.5 -5186.0 -5190.5 -5195.0 -5200.5 -5205.0 -5209.5 -5214.0 -5218.5 -5223.0 -5227.5 -5232.0 -5236.5 -5241.0 -5245.5 -5250.0 -5254.5 -5259.0 -5263.5 -5268.0 -5272.5 -5277.0 -5281.5 -5286.0 -5290.5 -5295.0 -5300.5 -5305.0 -5309.5 -5314.0 -5318.5 -5323.0 -5327.5 -5332.0 -5336.5 -5341.0 -5345.5 -5350.0 -5354.5 -5359.0 -5363.5 -5368.0 -5372.5 -5377.0 -5381.5 -5386.0 -5390.5 -5395.0 -5400.5 -5405.0 -5409.5 -5414.0 -5418.5 -5423.0 -5427.5 -5432.0 -5436.5 -5441.0 -5445.5 -5450.0 -5454.5 -5459.0 -5463.5 -5468.0 -5472.5 -5477.0 -5481.5 -5486.0 -5490.5 -5495.0 -5500.5 -5505.0 -5509.5 -5514.0 -5518.5 -5523.0 -5527.5 -5532.0 -5536.5 -5541.0 -5545.5 -5550.0 -5554.5 -5559.0 -5563.5 -5568.0 -5572.5 -5577.0 -5581.5 -5586.0 -5590.5 -5595.0 -5600.5 -5605.0 -5609.5 -5614.0 -5618.5 -5623.0 -5627.5 -5632.0<br			

Winds-Aloft Time Sections

Figures 21 and 22 (a) and (b) present vertical time sections of the mean wind patterns to 100,000 feet over San Nicolas Island, month by month. These are based on information in tables 17 through 52. Mean scalar wind speeds are shown in figure 21.

In figure 21, it is seen that there is a well-defined region of speeds over 60 knots in the zone between 37,000 and 43,000 feet during February and March. A secondary maximum of slightly over 40 knots occurs in September between 35,000 and 45,000 feet. The lightest mean speeds at any altitude below the stratonull, the stratospheric wind minimum, are found in July and August. The stratonull is evident near 70,000 feet with minimum speeds of less than 10 knots found in spring and autumn.

Similar time sections of the mean zonal and meridional components are provided in figure 22 (a) and (b). The strongest westerlies are seen near 40,000 feet in late winter and early spring with summer easterlies prominent above about 60,000 feet. Light northerly wind components are seen through the winter six months of the year, with stronger southerly components evident in the warmer months. At stratospheric levels, the westerly component is quite weak, with summer easterlies as the predominant feature at these altitudes. The meridional component in the stratosphere is very weak and about equally likely to be northerly or southerly.

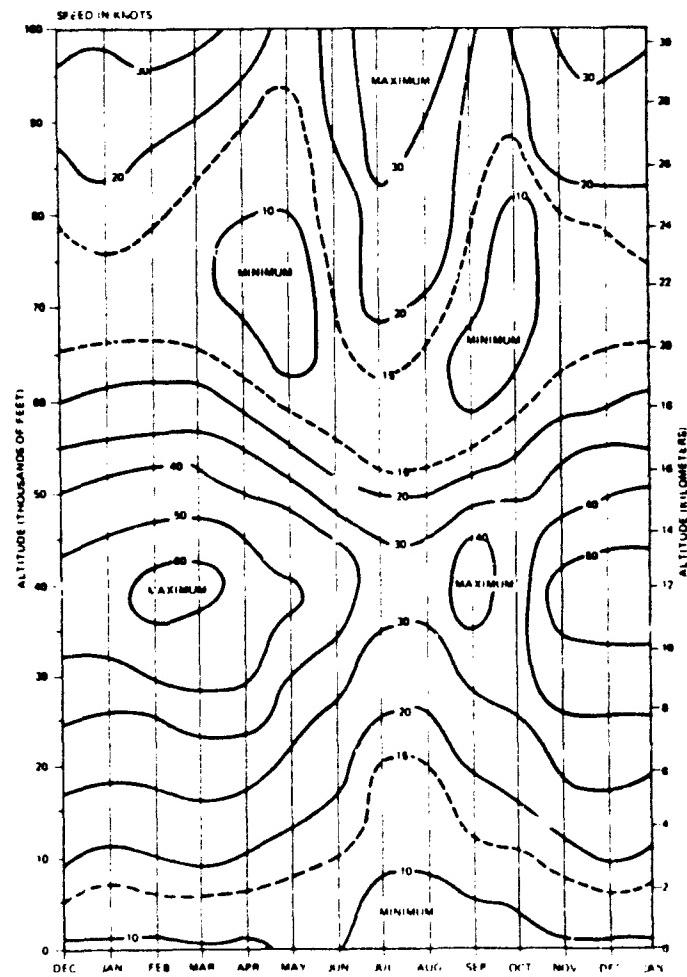


Figure 21. Mean Scalar Wind Speeds, San Nicolas Island.

Table 97. Cumulative Frequency Distribution of the Meridional Upper Wind Component at Standard Pressure Levels for Point Mugu, California: October

PRESSURE LEVEL (mb)	MEAN HEIGHT (ft)	NO. OBSERVATIONS -- SURFACE = 284, TOP = 240										
		MERIDIONAL WIND SPEED (KNOTS)			MERIDIONAL WIND SPEED (KNOTS)			MERIDIONAL WIND SPEED (KNOTS)			MEAN	
		1.0	2.2A	5.0	10.0	15.87	25.0	50.0	75.0	90.0	95.0	
SFC	1.3	-16.8	-14.7	-12.4	-10.2	-8.4	-6.3	-2.1	2.1	6.0	8.2	10.5
1000	4.0	-15.4	-13.5	-11.4	-9.3	-7.7	-5.8	-1.9	2.0	3.9	5.5	7.6
650	18.7	-16.7	-15.0	-12.3	-10.1	-8.3	-6.2	-2.0	2.2	4.3	6.1	8.3
900	33.6	-15.3	-13.4	-11.3	-9.2	-7.6	-5.7	-1.6	2.1	4.0	5.6	7.7
850	49.7	-16.7	-14.5	-12.1	-9.6	-7.7	-5.5	-0.9	3.7	5.9	7.8	10.3
800	66.3	-21.0	-18.2	-15.1	-12.9	-9.6	-6.8	-1.0	4.8	7.6	10.0	13.1
750	84.35	-25.4	-21.9	-18.1	-14.3	-11.3	-7.8	-0.7	6.4	9.9	12.9	16.7
700	102.99	-28.0	-24.2	-20.0	-15.6	-12.6	-8.8	-1.0	6.8	10.6	13.8	16.0
650	122.83	-30.5	-26.3	-21.7	-17.2	-13.6	-9.4	-0.9	7.6	11.6	15.4	19.9
600	143.93	-31.9	-27.4	-22.5	-17.7	-13.9	-9.4	-0.4	6.6	10.9	14.1	16.9
550	166.47	-35.9	-30.9	-25.5	-20.1	-15.9	-10.9	-0.9	9.2	14.1	18.3	21.7
500	190.75	-37.7	-32.5	-28.8	-21.1	-16.7	-11.5	-0.9	9.7	14.9	19.3	23.0
450	217.19	-44.0	-37.9	-31.3	-24.7	-19.5	-13.4	-1.1	11.2	17.3	22.5	30.7
400	245.70	-47.5	-40.9	-33.7	-26.5	-20.9	-14.3	-0.9	12.5	19.1	24.7	35.7
350	277.13	-53.7	-46.1	-37.8	-29.5	-22.1	-15.5	-0.1	15.3	22.9	29.3	39.1
300	312.57	-58.1	-49.9	-41.0	-32.1	-25.2	-17.0	-0.5	16.0	24.2	31.1	45.7
250	352.29	-60.9	-52.4	-43.1	-33.8	-26.5	-18.0	-0.6	16.8	25.3	32.6	48.9
200	400.23	-58.4	-50.5	-41.5	-32.5	-25.5	-17.3	-0.5	16.3	24.5	31.5	40.5
175	427.92	-50.2	-43.2	-35.5	-27.9	-21.9	-14.9	-0.6	13.7	20.7	26.7	42.0
150	459.15	-45.6	-39.2	-32.2	-25.2	-19.8	-13.4	-0.4	12.6	19.0	24.4	44.6
125	496.0	-41.6	-35.9	-29.7	-23.4	-18.6	-12.9	-1.3	10.3	16.0	20.8	39.0
100	540.26	-31.9	-27.6	-22.9	-18.2	-14.5	-10.2	-1.4	7.4	11.7	15.4	29.1
80	584.42	-25.1	-21.8	-18.2	-14.6	-11.8	-8.5	-1.4	4.9	8.2	11.9	18.2
70	611.06	-22.4	-19.7	-16.7	-13.7	-10.4	-7.1	-3.1	2.5	5.2	7.5	16.2

NOTE -- POSITIVE COMPONENTS ARE FROM THE SOUTH.

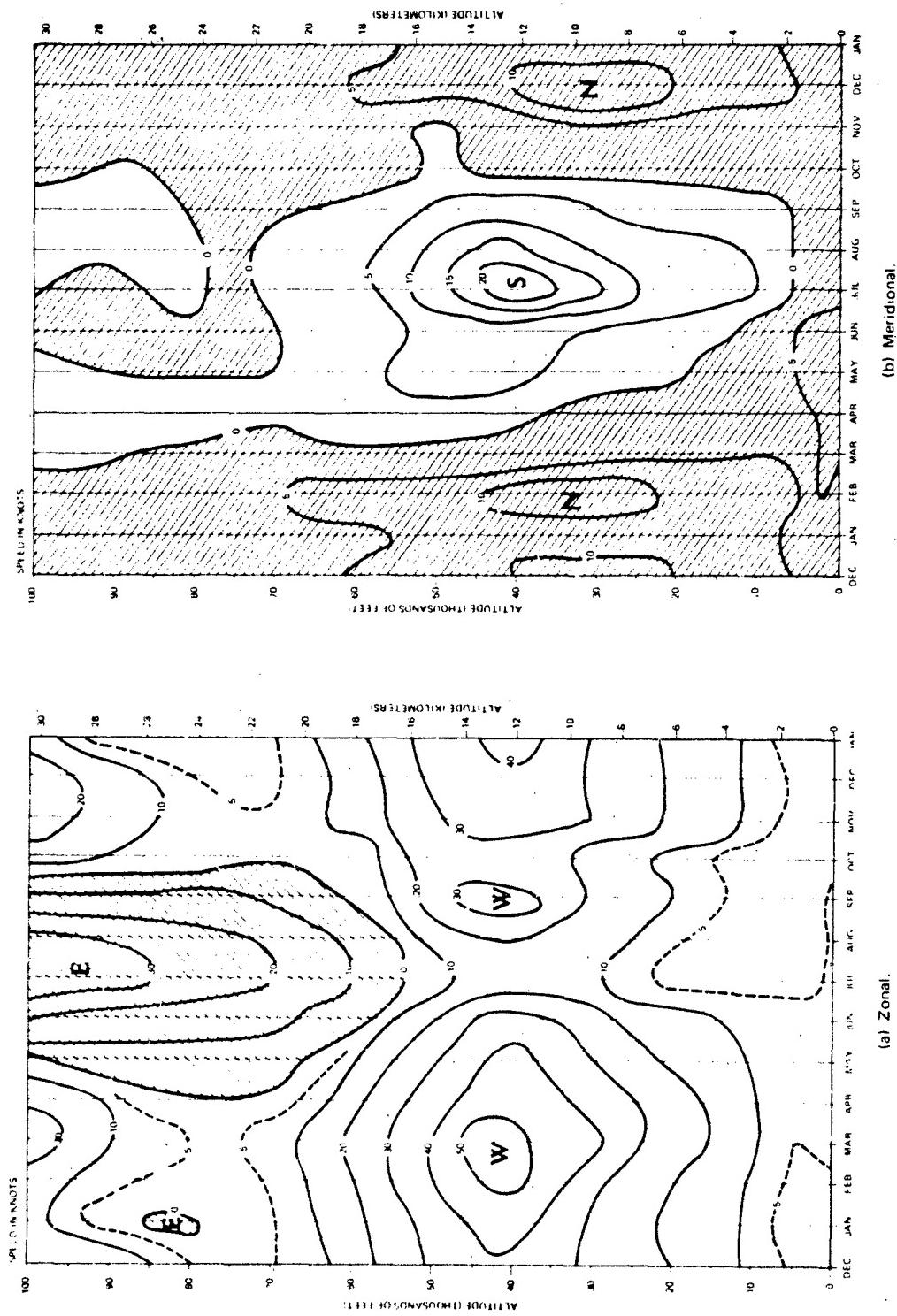


Figure 22. Mean Monthly Wind Components, San Nicolas Island.

TEMPERATURE DATA

Mean Upper-Air Temperature Profiles

Annual and seasonal profiles of upper-air temperature distributions, presented in a manner similar to those of the wind distributions, are shown in figures 23 through 27 for San Nicolas Island and figures 28 through 32 for Point Mugu. In addition to profiles of the mean temperature and the ± 1 standard deviation envelope, profiles are also plotted for the 1- and 99-percent occurrence frequencies.

As with the wind data, these curves are plotted at the mean heights of the standard pressure levels. Therefore, the inflection point of the mean temperature curves for either station should not be taken as a precise indicator of e^{+k} - the base or top of the low-level inversion or of the height of the tropopause.

Although the lower structure of the temperature profiles for Point Mugu might be taken as generally representative of the thermal conditions over the immediately adjacent ocean area, this is not true of the San Nicolas Island data. Surface at Point Mugu is 12 feet MSL. For San Nicolas, the height of the radiosonde release point was 571 feet (174 meters). Thus the station is, on many occasions, well within the inversion layer and only the inversion top is measured by the sounding. For the same reason, the San Nicolas Island surface data cannot be taken as representative of surface (sea-level) conditions over the surrounding waters. Also, because of the nature of the standard methods by which the data have been summarized, one cannot infer any of the fine structure of the atmospheric temperature profiles at either station.

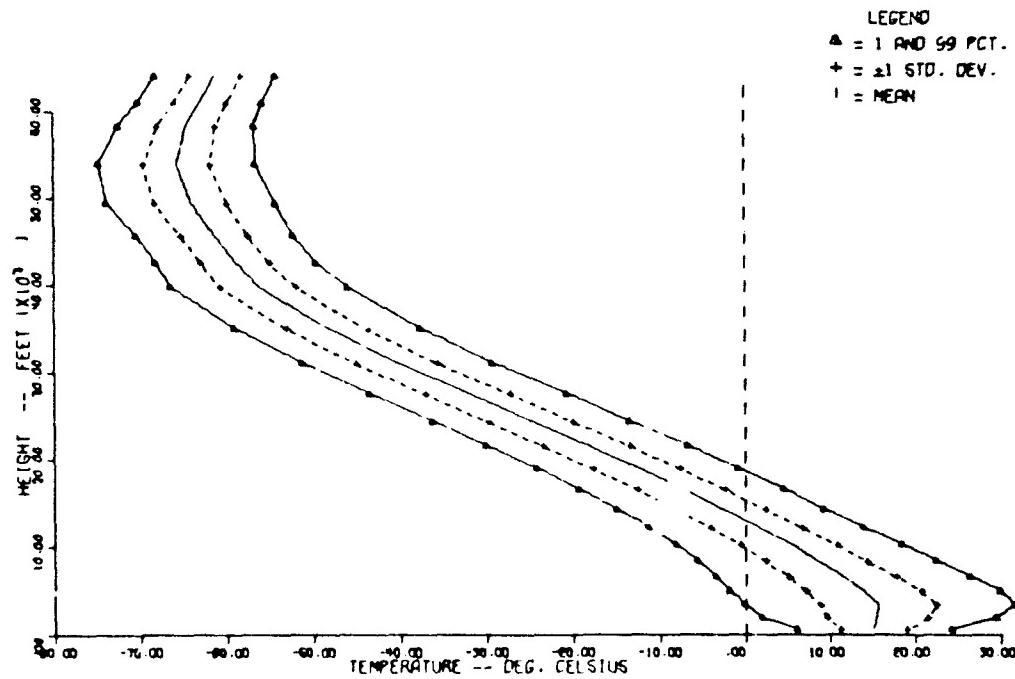


Figure 23. Upper-Air Temperatures for San Nicolas: Annual.

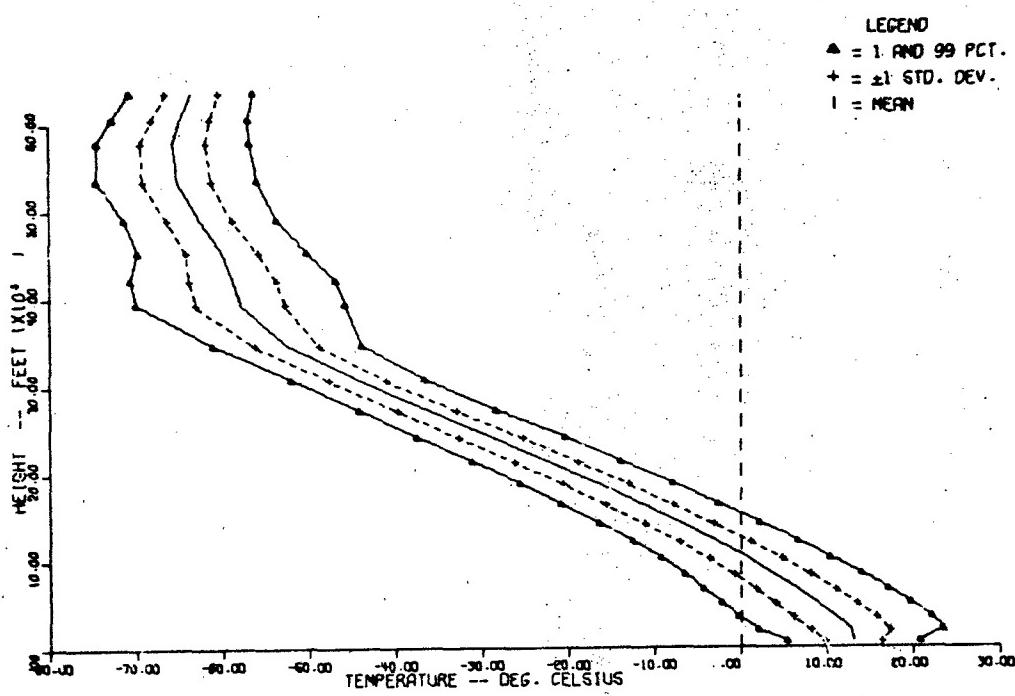


Figure 24. Upper-Air Temperatures for San Nicolas Island: Winter.

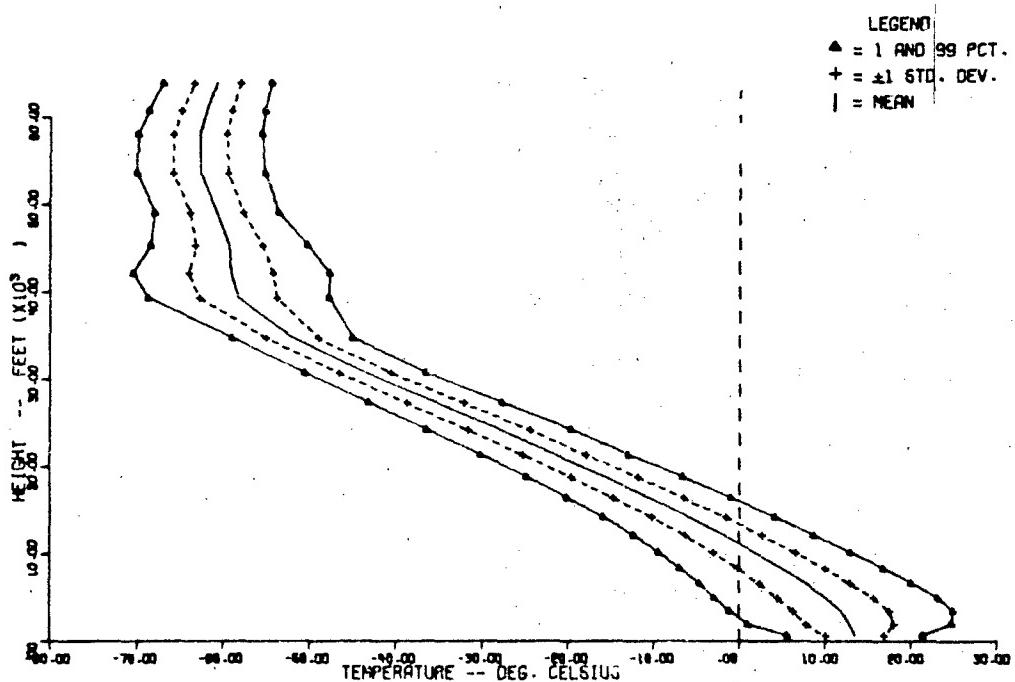


Figure 25. Upper-Air Temperatures for San Nicolas Island: Spring.

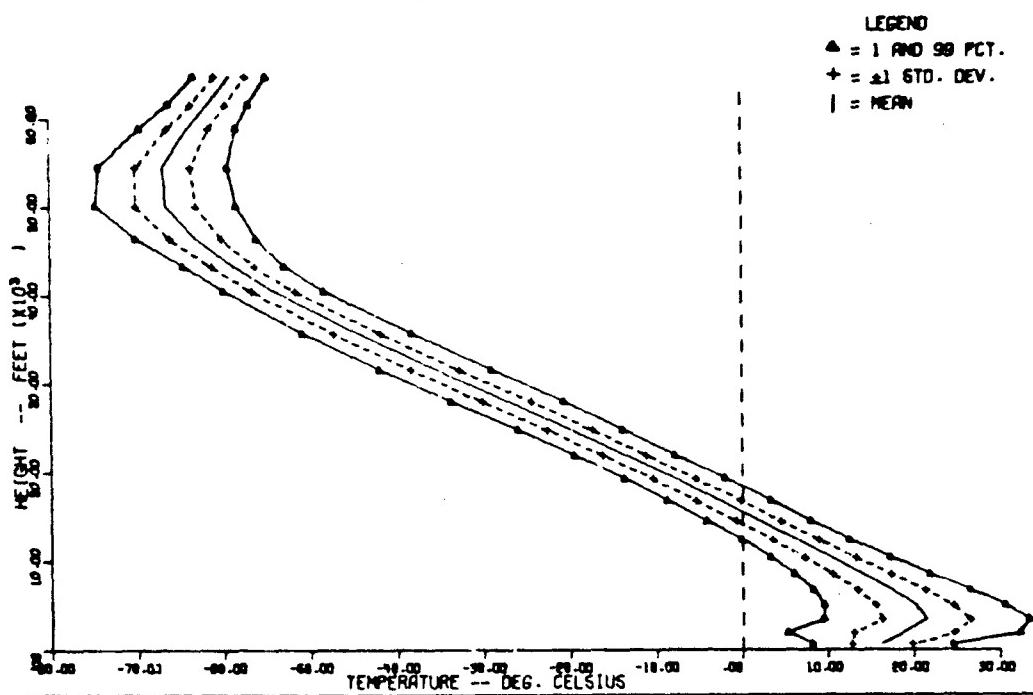


Figure 26. Upper-Air Temperatures for San Nicolas Island: Summer.

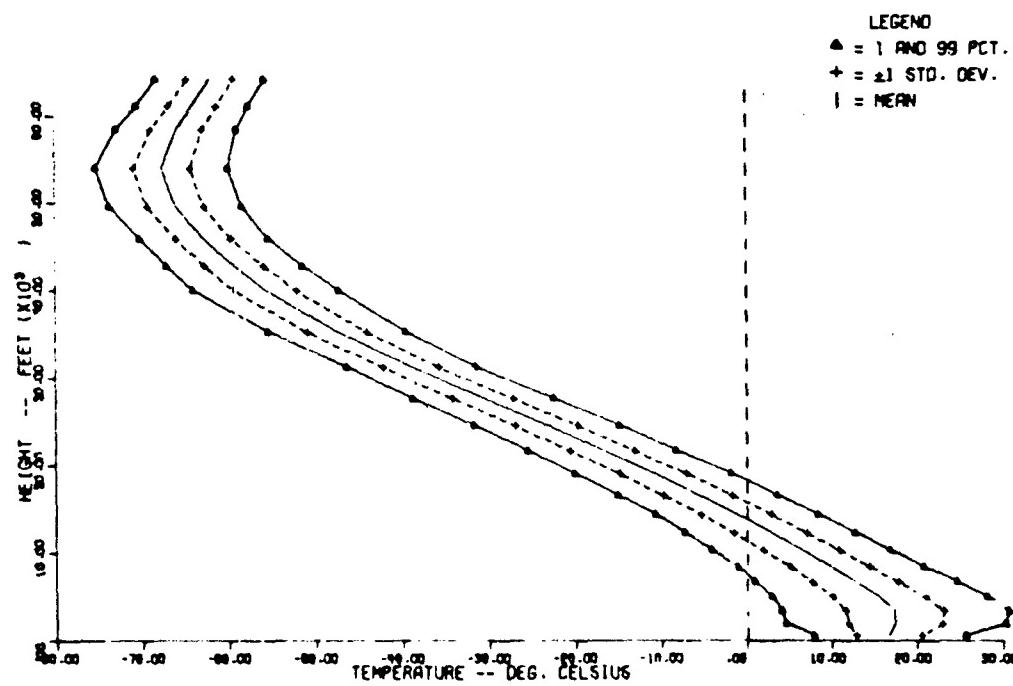


Figure 27. Upper-Air Temperatures for San Nicolas Island: Autumn.

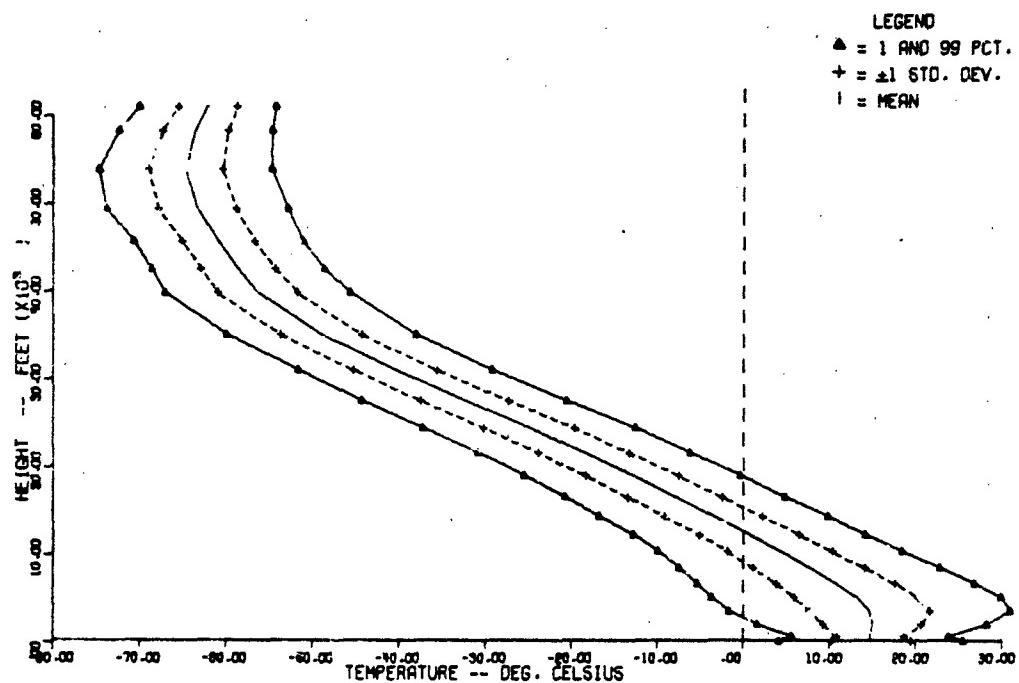


Figure 28. Upper-Air Temperatures for Point Mugu, California: Annual.

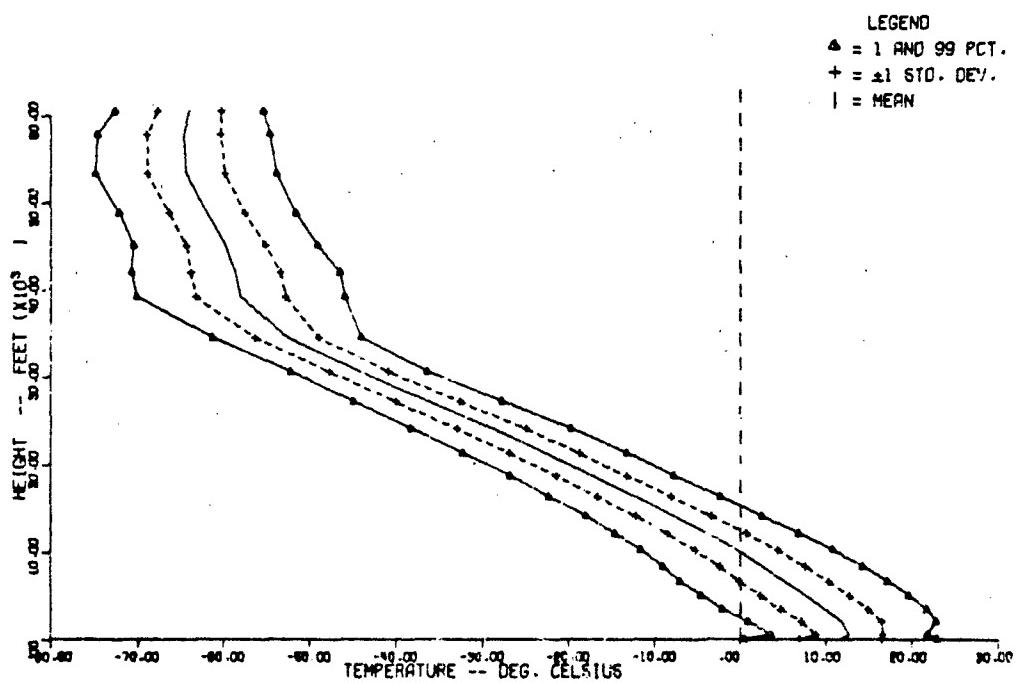


Figure 29. Upper-Air Temperatures for Point Mugu, California: Winter.

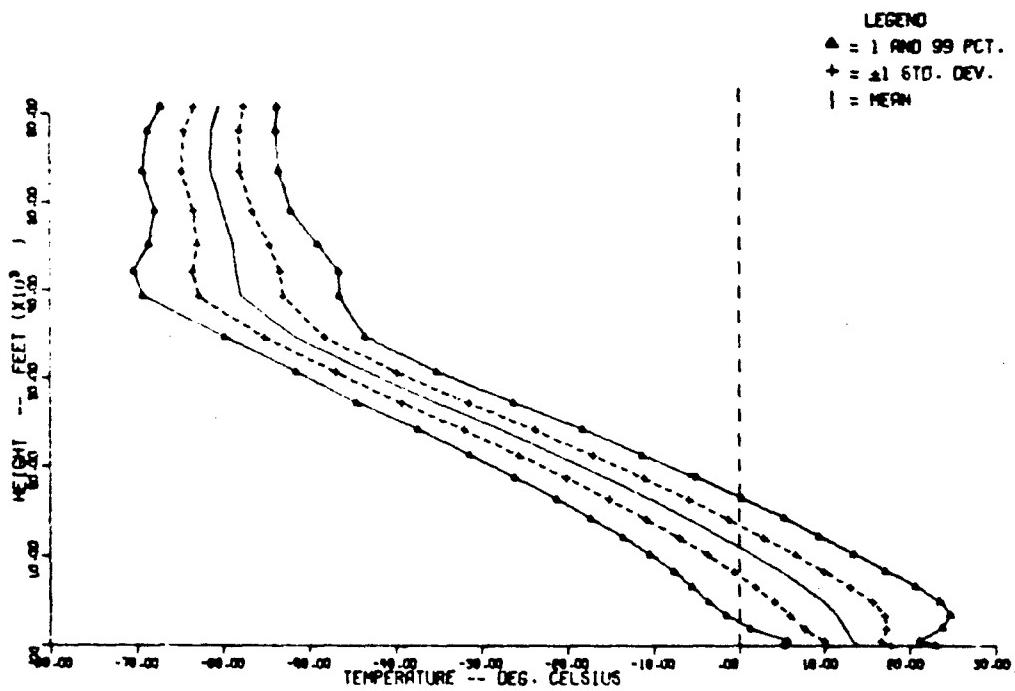


Figure 30. Upper-Air Temperatures for Point Mugu, California: Spring.

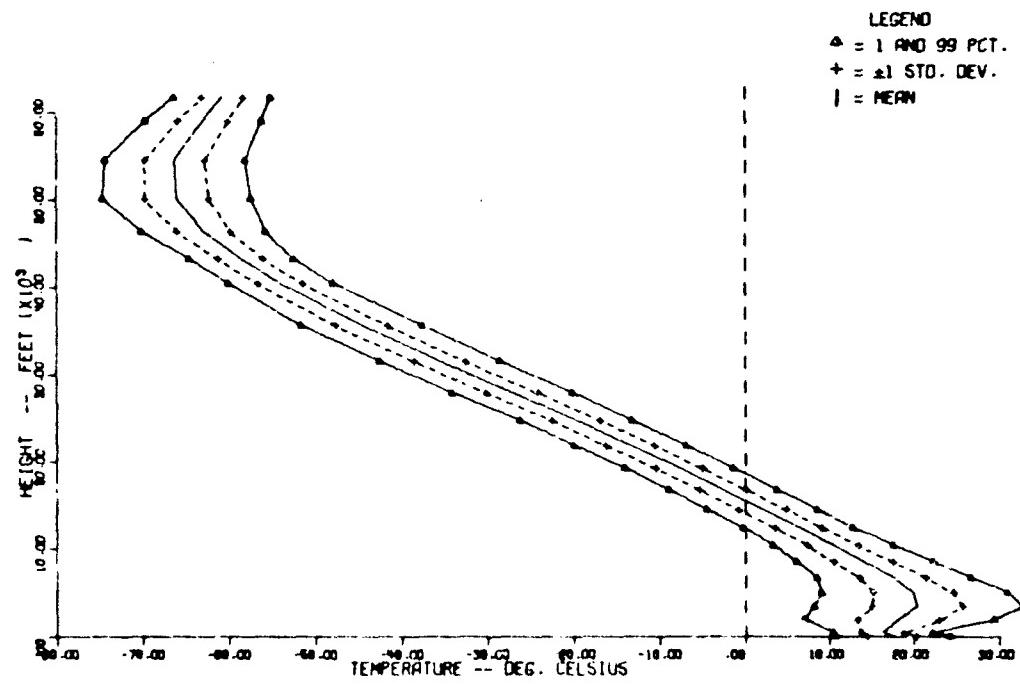


Figure 31. Upper-Air Temperatures for Point Mugu, California: Summer.

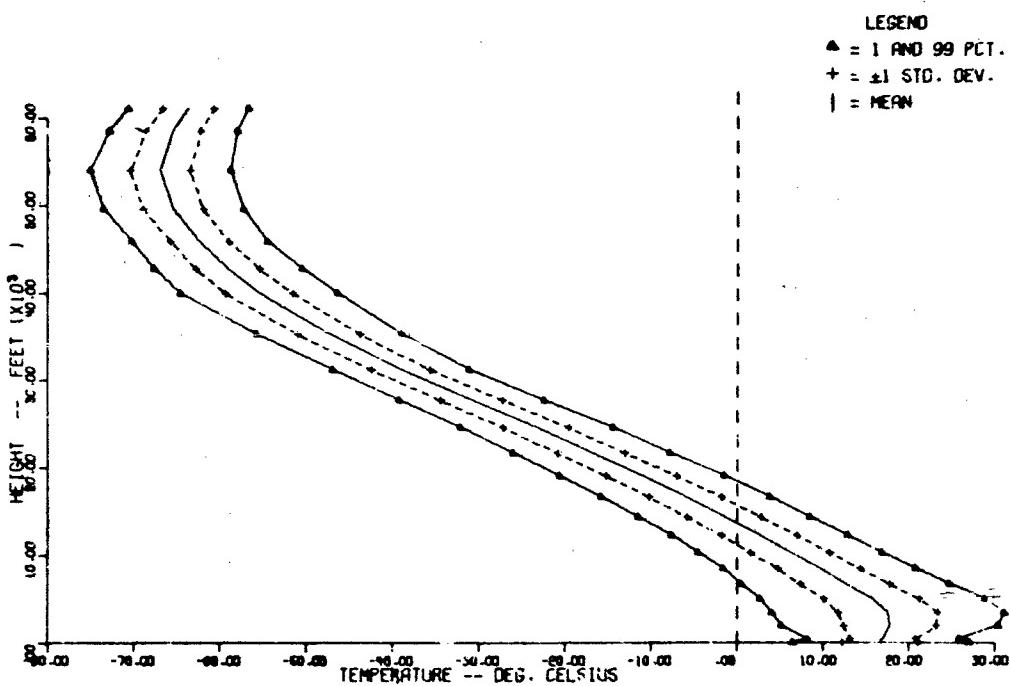


Figure 32. Upper-Air Temperatures for Point Mugu, California: Autumn.

Cumulative Frequency Distributions

Cumulative frequency distributions of the temperatures aloft between the surface and the 10-mb level (approximately 102,000 feet) are provided for each month as well as seasonally and annually in tables 104 through 120 and 121 through 137 for San Nicolas Island and Point Mugu, respectively. These are presented in a manner similar to the earlier tables of the wind frequency distribution.

Table 104. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: Annual

NO. OBSERVATIONS -- SURFACE = 8353, Trop = 3709

PRESSURE LEVEL (inches)	MEAN HEIGHT (feet)	TEMPERATURE (°F.)			TEMPERATURE (°C.)			TEMPERATURE (°F.)			TEMPERATURE (°C.)		
		1.0 -250	2.0 -250	5.0 -150	10.0 -100	15.0 -50	25.0 0	50. +50	75.0 +150	90.0 +150	95.0 +250	97.73 +250	99.6 +250
SFC	571	6.0	7.1	8.7	10.1	11.7	12.5	15.1	17.7	19.0	20.1	21.5	22.9
950	1840	1.9	3.4	5.9	8.0	9.7	11.6	15.6	19.6	21.5	23.2	25.3	29.3
900	3345	-0.1	2.1	4.5	7.0	8.9	11.1	15.7	20.3	22.5	26.4	29.3	31.5
850	4951	-1.9	-3	2.7	5.2	7.1	9.3	13.9	18.5	20.7	22.6	25.1	27.5
800	6617	-3.5	-1.4	-0.9	3.2	5.0	7.1	11.4	15.7	17.8	19.6	21.9	26.3
750	8376	-5.6	-3.6	-1.4	0.7	2.6	4.4	8.4	12.4	14.4	16.1	18.2	20.4
700	10216	-8.2	-6.3	-4.2	2.2	-0.6	1.3	5.1	8.9	10.8	12.4	14.4	16.5
650	12271	-11.3	-9.5	-7.6	-5.6	-4.1	-2.3	-1.3	-4.9	-6.7	-8.2	-10.2	12.1
600	14314	-14.9	-13.2	-11.3	-9.5	-8.0	-6.3	-4.1	-7	-2.4	-3.9	-5.7	7.6
550	16515	-19.3	-17.4	-15.8	-13.9	-12.5	-10.8	-7.4	-4.0	-2.3	-0.9	-1.0	2.6
500	18957	-24.2	-22.6	-20.0	-19.0	-17.6	-15.9	-12.6	-9.2	-7.6	-6.2	-4.4	-6.9
450	21558	-30.0	-28.4	-26.6	-24.8	-23.6	-21.8	-18.4	-15.0	-13.6	-12.0	-10.2	-10.4
400	24116	-36.2	-34.6	-32.8	-31.1	-29.7	-26.1	-24.8	-21.5	-19.9	-18.5	-16.8	-15.0
350	27556	-43.4	-41.9	-40.1	-38.4	-37.4	-35.4	-32.5	-28.6	-27.2	-25.8	-24.1	-22.3
300	31056	-51.3	-49.7	-48.0	-46.3	-45.0	-43.4	-40.3	-37.2	-35.6	-34.3	-32.6	-30.9
250	35049	-59.1	-57.4	-55.9	-54.3	-53.0	-51.5	-48.4	-45.3	-43.8	-42.5	-40.9	-39.2
200	39790	-66.4	-63.5	-61.9	-60.7	-58.7	-56.7	-53.4	-50.2	-48.1	-45.9	-43.1	-47.5
175	42552	-68.2	-66.9	-65.3	-64.0	-62.9	-61.6	-58.9	-56.2	-54.9	-53.6	-52.3	-49.6
150	45749	-70.5	-69.2	-67.8	-66.4	-65.3	-64.0	-61.4	-58.8	-57.5	-56.4	-55.0	-52.3
125	49313	-73.9	-72.5	-71.0	-69.5	-68.3	-66.9	-64.1	-61.3	-59.9	-58.7	-57.2	-54.1
100	53055	-74.6	-73.5	-72.1	-70.7	-69.6	-68.3	-65.7	-63.1	-61.2	-60.7	-59.3	-56.6
80	58314	-72.5	-71.4	-70.2	-69.0	-68.0	-66.9	-64.6	-62.3	-61.2	-60.2	-59.0	-57.7
70	61001	-70.2	-69.2	-68.1	-67.0	-66.1	-65.1	-63.0	-60.9	-59.9	-59.0	-57.9	-55.8
60	64124	-69.2	-67.2	-66.1	-65.0	-64.2	-63.2	-61.2	-59.2	-58.2	-56.4	-55.3	-54.2
50	67854	-66.3	-65.3	-64.2	-63.1	-62.1	-61.2	-59.1	-57.0	-56.0	-55.1	-52.9	-51.9
40	72470	-64.1	-63.0	-61.8	-60.7	-59.7	-58.7	-56.6	-54.5	-53.4	-52.5	-51.4	-50.2
30	78470	-61.9	-60.6	-59.3	-58.1	-57.1	-55.9	-53.6	-51.3	-50.1	-49.1	-47.9	-46.6
25	82372	-60.3	-59.1	-57.8	-56.4	-55.4	-54.2	-51.7	-49.2	-47.7	-45.6	-44.3	-43.1
20	86113	-58.7	-57.4	-56.0	-54.5	-53.4	-52.1	-49.4	-46.7	-45.4	-44.3	-42.8	-41.4
15	93369	-57.7	-55.7	-53.6	-52.0	-50.8	-49.3	-46.6	-43.5	-42.0	-40.8	-39.2	-37.6
11	102223	-53.7	-52.1	-50.2	-48.4	-47.0	-45.3	-42.1	-38.7	-37.0	-35.6	-33.8	-30.3
7	110276	-50.4	-47.0	-45.0	-43.4	-41.6	-39.0	-34.8	-31.8	-30.2	-28.6	-26.6	-24.6

Table 105. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: Winter

NO. OBSERVATIONS -- SURFACE = 1962. TOP = 77A

PRESSURE LEVEL (MAS)	MEAN HEIGHT (FT)	ITEMS OF ALTITUDE (DEGREES CELSIUS)									
		1.0			2.25			5.0			10.0
		15.87 -15.0	25.0	50.0 MEAN	75.0	84.13 +15.0	90.0	95.0	97.73 +25.0	99.0	
SFC	571	5.4	6.5	7.7	8.9	9.8	10.9	13.1	16.4	18.5	19.7
950	1916	2.1	3.6	5.3	6.9	8.2	9.7	12.8	15.9	18.7	20.3
900	3402	-0.3	1.3	3.0	4.8	6.1	7.7	10.9	14.1	17.0	20.5
850	4951	-2.3	-0.7	1.0	2.7	4.0	5.6	8.7	11.8	14.7	19.7
800	6558	-4.3	-2.8	-1.1	-0.5	1.8	3.3	6.4	9.5	11.0	13.9
750	8323	-6.6	-5.1	-3.5	-1.9	-0.7	-0.8	3.7	6.6	8.1	9.3
700	10154	-9.2	-7.8	-6.3	-4.8	-3.6	-2.2	-0.6	3.4	4.8	6.0
650	12083	-12.6	-11.2	-9.7	-8.2	-7.1	-5.7	-3.0	-0.3	1.1	2.2
600	14154	-16.4	-15.1	-13.7	-12.2	-11.1	-9.8	-7.1	-4.4	-3.1	-2.0
550	16348	-20.8	-19.5	-18.1	-16.7	-15.6	-14.3	-11.7	-9.1	-7.8	-6.7
500	18734	-25.7	-24.4	-23.0	-21.7	-20.4	-19.3	-16.8	-14.3	-13.0	-11.9
450	21229	-31.1	-29.9	-28.6	-27.2	-26.2	-25.0	-22.5	-20.0	-18.8	-17.8
400	24104	-37.5	-36.3	-35.0	-33.6	-32.6	-31.4	-29.5	-26.4	-24.2	-22.8
350	27192	-44.2	-42.1	-41.9	-40.7	-39.7	-38.6	-36.3	-34.0	-32.9	-31.9
300	30640	-52.0	-50.9	-49.7	-48.5	-47.6	-46.5	-44.3	-42.1	-41.0	-40.1
250	34577	-61.1	-59.9	-58.6	-57.2	-56.2	-55.0	-53.5	-51.5	-49.7	-45.1
200	39219	-70.9	-68.3	-66.4	-64.6	-63.1	-61.4	-57.9	-54.4	-52.7	-51.2
175	41995	-70.7	-69.0	-67.2	-65.3	-63.9	-62.2	-58.8	-55.4	-53.7	-52.3
150	45164	-69.8	-66.4	-64.9	-63.4	-61.4	-60.2	-57.2	-53.8	-51.3	-50.2
125	48875	-71.5	-70.5	-68.8	-67.5	-66.4	-65.1	-62.6	-60.1	-58.8	-57.7
100	53360	-74.5	-73.2	-71.8	-70.3	-69.2	-67.9	-65.2	-62.5	-61.2	-58.6
80	57808	-74.6	-73.3	-71.9	-70.6	-69.5	-68.2	-65.7	-63.2	-61.9	-59.5
70	6076	-72.7	-71.6	-70.4	-69.2	-68.2	-67.1	-64.8	-62.5	-61.4	-59.2
60	63442	-70.7	-69.0	-67.2	-65.3	-63.9	-62.2	-59.8	-57.4	-56.4	-54.3
50	67261	-68.2	-67.1	-66.3	-65.3	-64.5	-63.6	-61.0	-58.7	-57.7	-55.7
40	71814	-66.2	-65.3	-64.3	-63.3	-62.5	-61.6	-59.7	-57.8	-56.9	-55.0
30	77753	-63.9	-62.9	-61.9	-60.8	-60.0	-59.0	-57.1	-55.2	-54.1	-53.2
25	81558	-62.9	-61.9	-60.6	-59.5	-58.6	-57.5	-55.4	-53.3	-52.3	-51.3
20	86247	-61.6	-60.4	-59.1	-57.9	-56.9	-55.7	-53.4	-51.3	-50.2	-49.0
15	92372	-60.4	-59.0	-57.5	-56.0	-54.8	-53.4	-50.4	-48.9	-47.7	-45.2
10	101106	-57.6	-56.0	-54.3	-52.6	-51.3	-49.7	-46.6	-44.3	-43.7	-40.8
7	108891	-55.2	-53.4	-51.4	-49.4	-47.9	-46.1	-42.4	-38.7	-37.2	-35.6

Table 106. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: Spring

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)										99.0 +250
		2000 -250	5000 -1500	10000 -5000	15000 -10000	20000 -15000	50000 -50000	75000 -150000	100000 -150000	150000 -150000	200000 -150000	
SFC	571	5.6	6.7	7.9	9.1	10.1	11.2	13.5	15.8	16.9	17.9	20.3
950	1857	1.0	2.7	4.5	6.4	7.8	9.5	12.9	16.3	18.0	19.4	21.3
900	3303	-1.1	-0.7	2.7	4.7	6.3	8.1	11.0	15.7	17.5	19.1	23.1
850	4918	-2.9	-1.1	-1.9	-2.9	-4.5	-6.3	10.1	13.9	15.7	17.3	21.3
800	6452	-4.6	-2.9	-1.0	-0.9	-2.4	-4.1	7.7	11.3	13.0	14.5	16.4
750	8214	-7.0	-5.3	-3.5	-1.6	-0.2	1.5	4.9	8.3	10.0	11.4	13.3
700	10125	-9.4	-7.8	-6.1	-4.3	-3.0	-1.4	1.4	5.0	6.6	7.9	11.4
650	12044	-10.8	-9.2	-7.6	-6.3	-4.8	-1.4	-1.4	1.2	4.0	5.6	8.7
600	14144	-15.9	-14.5	-13.0	-11.4	-10.2	-8.8	-5.9	-3.0	-1.6	-0.4	2.7
550	16348	-20.2	-18.8	-17.3	-15.8	-14.7	-13.3	-10.6	-7.9	-6.5	-5.4	-2.4
500	18740	-26.8	-23.5	-22.1	-20.7	-19.6	-18.3	-15.7	-13.1	-11.8	-10.7	-9.3
450	21709	-30.1	-28.9	-27.6	-26.2	-25.2	-24.0	-21.5	-19.0	-17.8	-16.8	-15.4
400	24136	-36.4	-35.2	-34.9	-32.6	-31.6	-30.4	-28.6	-25.6	-24.4	-23.4	-22.1
350	27231	-43.1	-42.0	-40.8	-39.6	-38.7	-37.6	-35.4	-33.2	-32.1	-31.2	-30.0
300	30692	-49.5	-48.4	-47.3	-46.5	-45.5	-43.5	-41.5	-40.5	-39.7	-38.6	-37.5
250	34619	-51.9	-51.9	-51.9	-51.9	-51.9	-51.9	-49.9	-48.9	-48.9	-48.1	-45.9
200	39354	-58.7	-57.7	-56.6	-56.0	-56.7	-61.2	-58.2	-55.2	-53.7	-52.4	-49.2
175	42054	-70.4	-68.8	-67.0	-65.6	-63.9	-62.3	-59.0	-55.7	-54.1	-52.1	-47.6
150	45226	-68.4	-67.1	-65.7	-64.3	-63.2	-61.9	-59.3	-56.7	-55.4	-54.3	-51.5
125	48943	-67.9	-66.9	-65.8	-64.7	-63.8	-62.6	-60.7	-58.6	-57.6	-56.7	-53.5
100	53437	-67.0	-65.4	-64.4	-63.7	-62.7	-61.5	-59.5	-57.5	-56.5	-55.6	-52.6
80	58009	-69.4	-68.9	-67.8	-66.7	-65.8	-64.6	-62.7	-60.6	-59.6	-58.7	-55.5
70	60712	-68.7	-67.7	-66.7	-65.6	-64.8	-63.8	-61.9	-60.0	-59.0	-58.2	-55.1
60	63842	-67.0	-66.1	-65.1	-64.2	-63.4	-62.5	-60.7	-58.9	-58.0	-57.2	-54.3
50	67503	-65.2	-64.3	-63.3	-62.4	-61.6	-60.7	-58.9	-57.1	-56.2	-55.4	-52.6
40	72211	-62.4	-61.7	-60.7	-59.8	-59.0	-58.1	-56.3	-54.5	-53.6	-52.8	-50.9
30	78255	-59.7	-58.4	-57.8	-56.8	-56.0	-55.1	-53.2	-51.3	-50.4	-49.6	-47.6
25	82113	-58.3	-57.3	-56.2	-55.1	-54.3	-53.3	-51.3	-49.3	-48.3	-47.5	-45.3
20	86919	-56.4	-55.5	-54.3	-53.1	-52.1	-51.0	-48.7	-46.4	-45.3	-44.3	-40.8
15	92149	-53.4	-52.4	-51.1	-49.8	-48.4	-47.6	-45.2	-42.6	-41.6	-40.6	-39.3
10	102142	-49.6	-47.7	-46.3	-45.0	-43.9	-42.6	-40.1	-37.6	-36.3	-35.2	-32.5
7	110216	-44.6	-43.2	-41.8	-40.3	-39.2	-37.9	-35.2	-32.5	-31.2	-30.1	-28.6

Table 107. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: Summer

NO. OBSERVATIONS -- SURFACE = 2302, TOP = 999

PRESSURE LEVEL (INRS)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)										MEAN	50.0% +150 -150	75.0% +150 -150	90.0% +150 -150	95.0% +150 -150	97.7% +150 -150
		1.0	2.2R	5.0	10.0	15.8T	25.0	50.0	75.0	90.0	95.0						
SFC	571	8.1	9.3	10.6	11.8	12.8	14.0	16.1	18.6	19.8	20.8	22.0	23.3	24.5			
950	1827	5.3	7.2	9.3	11.4	13.0	14.9	16.8	18.8	20.7	24.6	26.2	28.3	30.4	32.3		
900	3353	9.5	11.2	13.0	14.9	16.3	18.0	21.4	24.8	26.5	27.9	29.8	31.6	33.3			
850	4970	9.6	11.1	12.7	14.3	15.6	17.1	20.1	23.1	24.6	25.9	27.5	29.1	30.4			
800	6677	8.3	9.6	11.0	12.4	13.5	14.8	17.4	20.0	21.3	22.4	23.6	25.2	26.5			
750	8448	6.1	7.2	8.4	9.6	10.6	11.7	14.0	16.3	17.4	18.4	19.6	20.8	21.9			
700	10367	3.3	4.3	5.4	6.5	7.3	8.3	10.3	12.3	13.3	14.1	15.2	16.3	17.3			
650	12369	-0.1	1.8	2.7	3.5	4.4	6.2	8.0	8.9	9.7	10.6	11.6	12.5				
600	14511	-4.2	-3.3	-2.4	-1.4	-0.7	0.2	1.9	3.6	4.5	5.2	6.2	7.1	8.0			
550	16741	-8.9	-8.0	-7.1	-6.1	-5.4	-4.5	-2.8	-1.1	-0.2	-5	-1.5	2.4	3.3			
500	19245	-13.7	-12.9	-12.0	-11.1	-10.4	-9.6	-7.9	-6.2	-5.4	-4.7	-3.8	-2.9	-2.1			
450	21920	-19.5	-18.7	-17.8	-16.9	-16.2	-15.4	-13.7	-12.0	-11.2	-10.5	-9.6	-8.7	-7.9			
400	24816	-26.1	-25.2	-24.3	-23.3	-22.6	-21.7	-20.1	-18.3	-17.4	-16.7	-15.7	-14.8	-13.9			
350	28009	-33.7	-32.8	-31.8	-30.8	-30.0	-29.1	-27.1	-25.3	-24.5	-23.6	-22.6	-21.6	-20.7			
300	31591	-42.0	-41.1	-40.1	-39.1	-38.3	-37.4	-35.5	-33.6	-32.7	-31.9	-30.9	-29.9	-29.0			
250	35671	-50.8	-49.9	-48.9	-48.0	-47.2	-46.3	-44.5	-42.7	-41.8	-41.0	-40.1	-39.1	-38.2			
200	40469	-59.9	-59.1	-58.2	-57.3	-56.6	-55.8	-54.0	-52.4	-51.4	-50.9	-50.0	-49.1	-48.3			
175	43264	-64.6	-63.8	-62.9	-62.0	-61.3	-60.5	-58.8	-57.1	-56.3	-55.6	-54.7	-53.8	-53.0			
150	46321	-70.1	-69.1	-68.0	-66.9	-66.1	-65.1	-63.1	-61.1	-60.1	-59.3	-58.2	-57.1	-56.1			
125	50019	-74.9	-73.6	-72.3	-71.1	-70.1	-68.9	-66.6	-64.3	-63.1	-62.1	-60.9	-59.6	-58.4			
100	54450	-74.4	-73.3	-72.1	-71.0	-70.1	-69.0	-66.9	-64.8	-63.7	-62.8	-61.7	-60.5	-59.4			
80	58911	-69.6	-68.8	-67.9	-67.1	-66.4	-65.6	-64.0	-62.4	-61.6	-60.9	-60.1	-59.2	-58.4			
70	61614	-65.6	-64.9	-64.2	-63.4	-62.6	-61.9	-61.1	-60.3	-59.6	-59.0	-58.3	-57.6	-56.9			
60	64744	-63.3	-62.7	-62.1	-61.4	-60.9	-60.3	-59.1	-57.9	-57.3	-56.8	-56.1	-55.5	-54.9			
50	68537	-60.3	-59.8	-59.2	-58.6	-58.2	-57.7	-56.6	-55.5	-55.0	-54.6	-54.0	-53.4	-52.9			
40	73215	-57.3	-56.8	-56.3	-55.7	-55.3	-54.8	-53.8	-52.8	-51.9	-51.0	-50.3	-50.0	-49.3			
30	79327	-54.2	-53.7	-53.1	-52.5	-52.1	-51.6	-50.5	-49.4	-48.9	-48.5	-47.9	-47.3	-46.8			
25	83225	-52.5	-51.9	-51.2	-50.7	-50.2	-49.6	-48.5	-47.4	-46.8	-46.3	-45.7	-44.5	-43.1			
20	88047	-50.4	-49.1	-48.4	-47.9	-47.3	-46.7	-46.0	-44.7	-44.1	-43.6	-42.9	-42.2	-41.6			
15	94479	-47.9	-47.2	-46.4	-45.6	-44.9	-44.3	-43.6	-42.8	-42.1	-41.3	-40.6	-40.0	-39.2	-37.7		
10	103478	-44.3	-43.4	-42.4	-41.5	-40.7	-39.8	-38.0	-36.2	-35.3	-34.5	-33.6	-32.6	-31.7			
7	111574	-40.8	-39.8	-38.7	-37.6	-36.7	-35.7	-33.6	-31.5	-30.5	-29.6	-28.5	-27.4	-26.4			

Table 108. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: Autumn

NO. OBSERVATIONS -- SURFACE = 2165, TOP = 1045

PRESSURE LEVEL (IMRS)	MEAN HEIGHT (FT.)	1.0			2.2A			5.0			10.0			15.07			25.0			50.0			75.0			90.0			95.0			97.73			99.0			
		-250	-150	MEAN	-150	-100	MEAN	-100	-50	MEAN	-50	MEAN	-50	-10	MEAN	-10	-5	MEAN	-5	0	MEAN	0	5	MEAN	5	10	MEAN	10	15	MEAN	15	20	MEAN	20	25	MEAN		
SFC	571	7.0	9.1	10.5	11.8	12.9	14.2	16.7	19.2	20.5	21.6	22.9	24.3	25.6																								
950	1854	4.6	6.4	8.4	10.4	11.9	13.7	17.4	21.1	22.9	24.4	26.4	28.4	30.2																								
900	3346	4.1	6.0	8.1	10.1	11.7	13.6	17.4	21.2	23.1	24.7	26.7	28.8	30.7																								
850	4961	2.9	4.7	6.6	8.6	10.1	11.9	15.5	19.1	20.9	22.4	24.4	26.3	28.1																								
800	8640	0.9	2.4	4.4	6.3	7.7	9.4	12.8	16.2	17.9	19.3	21.2	23.0	24.7																								
750	8416	-1.2	-0.4	2.1	3.8	5.1	6.7	9.8	12.9	14.5	15.8	17.5	19.2	20.6																								
700	10272	-4.1	-2.4	-1.0	-0.6	1.9	3.4	6.4	9.4	10.9	12.2	13.8	15.4	16.9																								
650	12241	-7.2	-5.4	-4.3	-2.7	-1.5	-0.1	2.8	5.7	7.1	8.3	9.9	11.4	12.8																								
600	16364	-10.4	-9.4	-7.9	-6.4	-5.3	-3.9	-1.2	1.5	2.9	4.0	5.5	7.0	8.4																								
550	16611	-15.0	-13.7	-12.3	-10.8	-9.7	-8.4	-5.7	-3.0	-1.5	-0.6	-0.9	-1.4	-1.8																								
500	19049	-20.0	-18.7	-17.3	-15.9	-14.8	-13.5	-10.9	-8.3	-6.3	-4.3	-2.3	-0.3	-1.3																								
450	21657	-25.4	-24.7	-22.9	-21.5	-20.5	-19.3	-16.4	-14.3	-12.1	-10.1	-8.1	-6.1	-4.1																								
400	24541	-31.6	-30.4	-29.1	-27.8	-26.8	-25.6	-23.2	-20.6	-18.6	-16.6	-14.6	-12.6	-10.6																								
350	38454	-38.4	-36.4	-34.1	-32.9	-31.4	-30.4	-28.3	-26.3	-24.3	-22.3	-20.3	-18.3	-16.3																								
300	31230	-46.4	-45.3	-44.1	-43.0	-42.1	-41.0	-40.4	-39.7	-38.1	-37.1	-35.7	-34.7	-33.7																								
250	35259	-55.3	-54.2	-53.0	-51.8	-50.8	-49.7	-47.4	-45.1	-43.0	-41.0	-39.0	-37.0	-35.0																								
200	40007	-64.0	-62.8	-61.5	-60.2	-59.2	-58.0	-56.4	-54.2	-52.0	-50.0	-48.0	-46.0	-44.0																								
175	42772	-67.1	-66.1	-64.8	-63.6	-62.6	-61.5	-59.2	-57.0	-54.8	-52.8	-50.8	-48.8	-46.8																								
150	45915	-70.3	-69.2	-68.0	-66.9	-66.0	-64.9	-62.8	-60.7	-58.7	-56.7	-54.7	-52.7	-50.7																								
125	49571	-73.7	-72.6	-71.4	-70.2	-69.3	-68.2	-66.2	-64.2	-62.2	-60.2	-58.2	-56.2	-54.2																								
100	53933	-75.3	-74.2	-73.0	-71.8	-70.9	-70.0	-67.8	-65.8	-63.8	-61.8	-59.8	-57.8	-55.8																								
80	58415	-72.9	-71.9	-70.8	-69.7	-68.7	-67.7	-66.9	-65.9	-64.9	-63.9	-62.9	-61.9	-60.9																								
70	61049	-70.5	-69.6	-68.6	-67.6	-66.6	-65.6	-64.6	-63.7	-62.7	-61.9	-60.9	-59.9	-58.9																								
60	64203	-68.2	-67.1	-66.3	-65.4	-64.5	-63.6	-62.6	-61.5	-60.5	-59.7	-58.7	-57.9	-56.9																								
50	67927	-66.0	-65.1	-64.1	-63.1	-62.1	-61.1	-60.1	-59.1	-58.1	-57.1	-56.1	-55.1	-54.1																								
40	72530	-63.6	-62.7	-61.7	-60.7	-59.7	-58.7	-57.7	-56.7	-55.7	-54.7	-53.7	-52.7	-51.7																								
30	78543	-60.8	-59.8	-58.8	-57.8	-56.8	-55.8	-54.8	-53.8	-52.8	-51.8	-50.8	-49.8	-48.8																								
25	82344	-59.7	-58.6	-57.6	-56.6	-55.6	-54.6	-53.6	-52.6	-51.6	-50.6	-49.6	-48.6	-47.6																								
20	87152	-57.7	-56.6	-55.6	-54.6	-53.6	-52.6	-51.6	-50.6	-49.6	-48.6	-47.6	-46.6	-45.6																								
15	93373	-55.6	-54.6	-53.6	-52.6	-51.6	-50.6	-49.6	-48.6	-47.6	-46.6	-45.6	-44.6	-43.6																								
10	102214	-53.1	-51.8	-50.4	-48.9	-47.6	-46.3	-45.0	-43.7	-42.4	-41.1	-39.8	-38.5	-37.2																								
7	110042	-50.8	-49.7	-48.7	-47.7	-46.7	-45.7	-44.7	-43.7	-42.7	-41.7	-40.7	-39.7	-38.7																								

Table 109. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: January

NO. OBSERVATIONS -- SURFACE = 675. TOP = 252

PRESSURE LEVEL (KRSI)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)										99.0 +2SD
		1.0 -250	2.0A -150	5.0 -150	10.0 -150	15.0? -150	25.0 -150	50.0 MEAN	75.0 -150	90.0 -150	95.0 -150	
SFC	571	5.2	6.1	7.5	8.6	9.5	10.6	12.7	14.8	15.9	16.8	17.9
950	1929	1.9	3.3	4.9	6.5	7.7	9.2	12.1	15.0	16.5	17.7	19.3
900	3415	-0.7	-0.8	2.5	4.1	5.4	6.9	10.0	13.0	14.6	15.9	17.5
850	4970	-2.3	-0.8	-0.8	2.4	3.6	5.1	8.0	10.9	12.4	13.6	15.2
800	6694	-4.0	-2.6	-1.1	-0.4	1.6	3.0	5.9	8.6	10.0	11.2	12.7
750	8323	-6.4	-5.0	-2.5	-2.0	-0.9	-0.5	3.2	5.9	7.3	8.4	9.9
700	10151	-9.2	-7.9	-6.5	-5.0	-3.9	-2.6	-0.1	2.9	4.1	5.2	6.7
650	12077	-12.6	-11.3	-9.9	-8.5	-7.4	-6.1	-3.5	-0.9	-0.4	1.5	2.9
600	14147	-16.3	-15.0	-12.2	-12.2	-11.1	-9.8	-7.2	-4.6	-3.3	-2.2	-0.8
550	16335	-20.9	-17.6	-16.2	-16.9	-15.8	-14.5	-12.0	-9.5	-8.2	-7.7	-5.8
500	18720	-26.1	-24.8	-23.4	-22.1	-21.0	-19.7	-17.2	-14.7	-13.4	-12.3	-11.0
450	21270	-30.5	-29.1	-27.8	-26.4	-25.4	-23.4	-20.4	-16.7	-13.4	-12.3	-11.0
400	24045	-37.9	-36.7	-35.4	-34.0	-33.0	-31.8	-29.3	-26.8	-24.6	-23.2	-21.9
350	27165	-44.5	-43.4	-42.2	-41.0	-40.0	-38.9	-36.6	-34.3	-32.2	-31.0	-28.7
300	30610	-51.9	-49.9	-48.7	-47.6	-46.8	-44.8	-42.6	-40.6	-38.6	-36.6	-34.5
250	34541	-61.1	-59.1	-57.4	-56.4	-55.2	-52.9	-50.6	-48.4	-46.2	-45.9	-44.7
200	39193	-70.3	-68.6	-66.7	-64.9	-63.4	-61.7	-58.7	-54.7	-53.0	-51.5	-49.7
175	41949	-71.0	-69.3	-67.4	-65.6	-64.1	-62.4	-58.9	-55.4	-52.2	-50.4	-46.5
150	45119	-69.7	-68.3	-66.8	-65.3	-64.1	-62.7	-59.9	-57.1	-54.5	-52.5	-50.1
125	48875	-70.9	-69.7	-68.4	-67.0	-66.0	-64.8	-62.1	-59.8	-57.6	-56.2	-53.7
100	53223	-74.1	-72.8	-71.4	-70.0	-68.9	-67.6	-65.0	-62.4	-60.6	-57.2	-55.9
80	57776	-73.6	-72.4	-71.1	-69.8	-68.8	-67.6	-65.2	-62.8	-60.6	-59.3	-58.0
70	60446	-71.8	-70.7	-69.5	-68.4	-67.5	-66.4	-64.3	-62.2	-60.1	-59.1	-56.8
60	63550	-69.4	-68.5	-67.5	-66.5	-65.7	-64.8	-62.9	-61.0	-60.2	-59.1	-56.4
50	67247	-67.2	-66.3	-65.4	-64.4	-63.7	-62.7	-61.1	-59.4	-58.5	-57.8	-55.3
40	71814	-65.3	-64.4	-63.5	-62.5	-61.6	-60.9	-59.2	-57.5	-56.6	-55.9	-54.9
30	77759	-63.7	-62.7	-61.7	-60.6	-59.8	-58.8	-57.4	-55.9	-54.0	-53.2	-52.1
25	81565	-62.8	-61.7	-60.5	-59.4	-58.5	-57.4	-55.3	-53.2	-52.1	-51.2	-50.1
20	86253	-61.2	-60.1	-58.9	-57.7	-56.8	-55.7	-53.5	-51.3	-50.2	-49.3	-48.1
15	92375	-60.3	-59.0	-57.6	-56.2	-55.1	-53.8	-51.2	-48.6	-46.2	-44.8	-43.4
10	101109	-58.3	-56.7	-54.9	-53.2	-51.8	-50.2	-46.9	-43.6	-40.6	-38.9	-37.1
7	10894	-56.1	-54.3	-52.3	-50.3	-48.8	-47.0	-43.3	-39.6	-36.3	-34.3	-32.3

Table 110. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: February

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	NO. OBSERVATIONS -- SURFACE = 624. TOP = 268										
		1.6	2.2A	5.0	10.0	15.0	15.07	25.0	50.0	75.0	90.0	95.0
SFC.	5.1	6.1	7.6	8.8	9.4	11.0	13.3	15.6	16.8	17.8	19.0	20.3
950	1916	2.6	3.9	5.6	7.2	8.5	10.0	13.1	16.2	17.7	19.0	20.6
900	3606	.2	1.8	3.5	5.2	6.5	8.1	11.2	14.3	15.9	17.2	18.9
850	4944	-1.6	-0.1	1.7	3.1	4.4	5.9	8.9	11.9	13.4	14.7	16.3
800	6601	-3.6	-2.2	0.7	2.1	3.5	5.6	9.3	10.3	11.7	13.9	15.0
750	8327	-5.5	-4.2	-2.8	-1.3	-0.2	1.1	3.8	6.5	7.8	8.9	10.4
700	10157	-8.1	-6.9	-5.6	-4.2	-3.2	-2.0	-5.5	3.0	4.2	5.2	6.6
650	12097	-11.4	-10.2	-8.9	-7.7	-6.7	-5.5	-3.2	-0.9	-3	1.3	2.5
600	14157	-15.3	-14.2	-13.0	-11.6	-10.4	-9.7	-7.4	-5.1	-4.0	-3.0	-1.8
550	16348	-19.4	-18.7	-17.5	-16.3	-15.4	-14.3	-12.1	-9.9	-8.8	-7.9	-6.7
500	18727	-25.0	-23.9	-22.7	-21.5	-20.6	-19.5	-17.3	-15.1	-14.0	-13.1	-11.9
450	21240	-30.8	-29.7	-28.5	-27.3	-26.4	-25.3	-23.1	-20.5	-19.8	-18.9	-17.7
400	24045	-37.3	-36.2	-35.0	-33.8	-32.9	-31.8	-29.6	-27.4	-26.3	-25.4	-24.2
350	27142	-44.5	-43.4	-42.2	-41.1	-40.2	-39.1	-37.0	-34.9	-33.8	-32.9	-31.8
300	30660	-52.7	-51.6	-50.4	-49.2	-48.3	-47.2	-45.1	-42.8	-41.7	-40.8	-39.6
250	34524	-62.4	-61.1	-59.7	-58.2	-57.1	-55.8	-53.1	-50.4	-49.1	-48.0	-46.5
200	39140	-70.7	-68.0	-66.9	-64.9	-63.3	-61.5	-57.7	-53.9	-52.1	-50.5	-48.5
175	41946	-69.2	-67.4	-65.8	-64.7	-62.7	-61.1	-57.4	-54.5	-52.9	-51.5	-49.8
150	45131	-68.0	-66.7	-65.3	-64.0	-62.9	-61.6	-59.1	-56.6	-54.3	-52.9	-50.2
125	48058	-69.4	-68.7	-67.5	-66.3	-65.3	-64.2	-61.9	-59.6	-58.5	-57.5	-56.1
100	53356	-73.8	-72.5	-71.1	-69.8	-68.7	-67.4	-64.9	-62.4	-61.1	-60.0	-58.7
80	57812	-74.4	-73.2	-71.9	-70.5	-69.5	-68.3	-65.8	-63.3	-62.1	-61.1	-59.7
70	60476	-72.7	-71.4	-70.4	-69.2	-68.3	-67.2	-64.5	-62.8	-61.7	-60.8	-58.4
60	63570	-71.4	-70.1	-69.1	-68.9	-67.1	-66.0	-63.9	-61.6	-60.7	-59.8	-57.3
50	67251	-69.6	-68.5	-67.3	-66.2	-65.3	-64.2	-62.1	-60.0	-58.9	-58.0	-56.4
40	718n4	-67.4	-66.4	-65.3	-64.1	-63.1	-62.0	-59.7	-57.4	-56.3	-55.3	-54.6
30	77446	-63.9	-62.9	-61.8	-60.7	-59.7	-58.9	-56.9	-54.9	-53.9	-52.1	-50.9
25	81575	-62.7	-61.3	-60.3	-59.3	-58.5	-57.6	-55.7	-53.6	-52.9	-52.1	-50.1
20	86240	-59.2	-58.2	-57.2	-56.1	-55.3	-54.3	-52.4	-50.5	-49.5	-48.7	-46.6
15	92457	-57.1	-55.8	-54.5	-53.3	-52.3	-51.1	-48.8	-46.5	-45.3	-44.3	-41.8
10	101266	-53.5	-52.7	-50.8	-49.4	-48.3	-47.0	-44.4	-41.8	-40.5	-39.4	-36.6
7	1091n4	-49.7	-48.1	-46.8	-45.2	-44.0	-42.6	-39.7	-36.8	-35.4	-34.2	-32.6

Table 111 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: March

NO. OBSERVATIONS == SURFACE == 756. TOP == 241

PRESSURE LEVEL (MRS)	MEAN HEIGHT (FT)	2.2A -251	5.0 -140	10.0 -15.87	15.87 -150	TEMPERATURE (DEGREES CELSIUS)							
						50.0 MEAN		75.0		84.13 +150		90.0	
						12.0	16.0	15.2	12.2	13.7	15.3	16.6	18.4
SFC	571	5.7	7.8	8.9	9.8	10.8	12.0	15.0	16.0	16.9	18.0	19.1	20.1
950	1840	1.7	3.7	4.8	6.4	7.7	12.2	15.2	16.7	18.0	19.6	21.2	22.7
900	3363	-0.7	*.9	2.6	4.4	5.7	10.5	13.7	15.3	16.6	18.4	20.1	21.7
850	4918	-2.7	-1.1	*.6	2.3	5.6	6.3	11.4	13.0	14.3	16.0	17.7	19.3
800	6542	-5.0	-3.5	-1.8	-0.2	1.1	2.6	8.8	10.3	11.6	13.2	14.9	16.4
750	8221	-7.6	-5.9	-4.3	-2.7	-1.5	-0.0	2.9	5.8	7.3	8.5	10.1	11.7
700	10095	-9.4	-8.4	-6.9	-5.4	-4.3	-2.9	-0.7	2.5	3.9	5.0	6.5	8.0
650	12021	-12.8	-11.5	-10.1	-8.7	-7.6	-6.3	-3.7	-1.1	2.7	4.1	5.4	
600	14044	-16.7	-15.4	-14.0	-12.7	-11.6	-10.3	-7.8	-5.3	-4.0	-2.9	-1.6	-0.2
550	16274	-20.9	-19.7	-18.4	-17.1	-16.1	-14.9	-12.5	-10.1	-8.9	-7.9	-6.6	-5.3
500	18632	-25.9	-24.7	-23.4	-22.2	-21.2	-20.0	-17.5	-15.4	-14.2	-13.2	-12.0	-10.7
450	21201	-30.0	-29.8	-28.6	-27.6	-26.7	-25.6	-23.4	-21.2	-20.1	-19.2	-18.0	-16.8
400	24053	-37.6	-36.5	-35.3	-35.2	-33.2	-32.1	-29.9	-27.7	-26.6	-25.7	-23.5	-22.2
350	27077	-44.0	-43.0	-42.6	-40.9	-40.1	-39.1	-37.2	-35.3	-34.3	-33.5	-32.4	-30.4
300	30512	-51.1	-50.2	-49.3	-48.3	-47.6	-46.7	-45.0	-43.3	-42.4	-41.7	-40.7	-38.9
250	34432	-60.2	-59.2	-58.1	-57.0	-56.2	-55.2	-53.7	-51.2	-50.2	-49.4	-48.3	-46.2
200	39041	-70.3	-68.3	-66.7	-64.9	-63.4	-61.7	-58.2	-54.7	-53.0	-51.5	-49.7	-47.8
175	41837	-70.2	-68.5	-66.6	-64.8	-63.3	-61.6	-58.1	-54.6	-52.9	-51.4	-49.6	-46.0
150	45020	-66.7	-64.9	-63.5	-62.5	-61.3	-58.8	-56.3	-55.1	-54.1	-52.7	-51.4	-50.2
125	48757	-68.5	-67.4	-66.2	-65.1	-64.2	-63.1	-61.0	-58.9	-57.8	-56.9	-55.8	-53.6
100	53244	-70.4	-69.7	-68.5	-67.4	-66.5	-65.4	-63.3	-61.2	-60.1	-59.2	-58.1	-55.8
80	57742	-70.5	-69.6	-68.5	-67.4	-66.6	-65.6	-63.6	-61.6	-60.6	-59.8	-58.7	-57.6
70	60476	-69.1	-68.2	-67.2	-66.3	-65.5	-64.6	-62.8	-61.0	-60.1	-59.3	-58.4	-57.4
60	63602	-67.8	-66.9	-66.0	-65.0	-64.3	-63.4	-61.7	-60.0	-59.1	-58.4	-57.4	-56.5
50	67320	-66.2	-65.3	-64.4	-63.4	-62.7	-61.8	-60.1	-58.4	-57.5	-56.8	-55.8	-54.0
40	71916	-63.9	-63.0	-62.1	-61.1	-60.4	-59.5	-57.8	-56.1	-55.2	-54.5	-53.5	-51.7
30	77913	-61.2	-60.3	-59.3	-58.4	-57.6	-56.7	-54.9	-53.1	-52.2	-51.4	-50.5	-48.6
25	81742	-60.3	-59.3	-58.2	-57.1	-56.2	-55.2	-53.1	-51.0	-50.0	-49.1	-48.0	-45.9
20	86516	-59.2	-58.0	-56.7	-55.3	-54.3	-53.1	-50.4	-48.1	-46.9	-45.9	-44.5	-42.0
15	92717	-57.2	-55.8	-54.3	-52.7	-51.5	-50.1	-47.2	-44.3	-42.9	-41.7	-40.1	-37.2
10	101678	-51.8	-50.4	-48.9	-47.3	-46.1	-44.7	-41.8	-38.9	-37.5	-36.3	-34.7	-31.8
7	106546	-47.6	-46.1	-44.4	-42.8	-41.5	-40.0	-37.8	-35.8	-33.8	-31.0	-29.4	-27.7

Table 112. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: April

NO. OBSERVATIONS -- SURFACE = 679, TOP = 321

PRESSURE L. & L. (INCHES)	MEAN HEIGHT (FEET)	TEMPERATURE (DEGREES CELSIUS)									
		-150	-100	-50	0	50	100	150	200	250	300
SFC	571	4.9	6.1	7.4	8.8	11.0	13.5	16.0	18.2	19.6	20.9
950	1850	-0.3	1.4	3.5	7.1	9.9	12.7	16.5	18.3	19.9	23.9
900	3317	-2.4	-0.8	1.4	3.5	5.3	7.3	11.4	15.5	19.2	25.6
850	4898	-4.8	-2.8	-0.6	1.6	3.3	5.3	9.4	13.5	15.5	21.6
800	6519	-5.9	-4.1	-2.1	-0.1	1.5	3.3	7.1	10.9	12.7	18.3
750	8244	-6.5	-4.6	-2.6	-1.1	-0.7	0.3	4.3	7.9	9.7	11.2
700	15112	-10.4	-9.1	-7.3	-5.4	-4.0	-2.3	1.1	4.5	6.2	7.6
650	12014	-13.4	-11.8	-10.1	-8.4	-7.1	-5.5	-2.4	0.7	2.3	3.6
600	14111	-17.1	-15.6	-14.0	-12.4	-11.1	-9.6	-7.6	-5.6	-2.1	0.8
550	16312	-20.6	-19.2	-17.7	-16.2	-15.1	-13.7	-11.6	-9.6	-6.9	-5.8
500	18771	-23.5	-22.2	-20.8	-19.6	-18.6	-16.1	-14.1	-12.4	-11.4	-8.7
450	21242	-28.4	-27.5	-26.3	-25.3	-24.1	-21.8	-19.5	-18.3	-15.1	-13.6
400	24045	-35.9	-34.8	-33.6	-31.6	-30.6	-28.4	-26.3	-25.2	-23.2	-22.0
350	27174	-42.2	-41.7	-40.3	-39.3	-38.5	-37.6	-35.7	-32.9	-32.1	-30.1
300	30636	-49.9	-49.0	-48.1	-47.1	-46.4	-45.5	-43.8	-42.1	-41.2	-39.5
250	34577	-58.5	-57.6	-56.6	-55.7	-54.9	-54.0	-52.2	-50.4	-49.5	-48.7
200	39216	-69.2	-67.7	-66.0	-65.4	-63.1	-61.6	-58.5	-55.4	-53.0	-49.3
175	41042	-69.3	-67.5	-65.6	-64.2	-62.5	-59.1	-55.7	-52.6	-50.7	-47.8
150	45154	-68.4	-67.4	-65.9	-64.4	-63.3	-61.9	-59.2	-56.5	-54.1	-49.6
125	48841	-67.7	-66.7	-65.6	-64.5	-63.4	-62.6	-60.5	-58.4	-56.5	-53.3
100	53412	-70.2	-69.1	-67.9	-66.7	-65.7	-64.6	-62.3	-60.0	-58.9	-55.7
80	57949	-70.6	-69.4	-68.1	-66.9	-65.9	-64.9	-62.7	-60.4	-58.9	-55.4
70	60653	-69.1	-68.0	-66.8	-65.7	-64.8	-63.7	-61.4	-59.5	-57.5	-54.1
60	63736	-61.4	-60.4	-59.5	-58.4	-57.4	-56.4	-54.4	-52.6	-50.7	-48.9
50	67576	-65.0	-64.1	-63.1	-62.2	-61.4	-60.5	-58.7	-56.9	-55.0	-52.4
40	72142	-62.3	-61.4	-60.5	-59.5	-58.6	-57.9	-56.2	-54.5	-52.9	-50.1
30	78205	-59.2	-58.3	-57.4	-56.4	-55.7	-54.6	-53.1	-51.4	-50.5	-48.4
25	82040	-57.7	-56.8	-55.8	-54.8	-54.0	-53.0	-51.2	-49.3	-47.6	-45.6
20	86840	-55.3	-54.4	-53.4	-52.4	-51.6	-50.7	-48.8	-46.9	-45.2	-43.2
15	93110	-51.5	-49.6	-48.6	-47.6	-46.7	-45.8	-43.1	-42.2	-41.4	-39.4
10	102174	-47.5	-46.4	-45.2	-44.0	-43.1	-42.0	-39.8	-37.6	-35.6	-33.2
7	110157	-44.0	-42.8	-41.5	-40.1	-39.1	-37.9	-35.7	-33.7	-30.7	-28.0

TABLE 13. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: May

NO. OBSERVATIONS = SURFACE = 709, TOP = 125

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	INPUT VALUES (DEGREES CELSIUS)									
		1.0 -2.5%	2.0 -2.5%	5.0 -2.5%	10.0 -2.5%	15.0 -2.5%	20.0 -2.5%	25.0 -2.5%	30.0 -2.5%	35.0 -2.5%	40.0 -2.5%
SFC	571	6.1	7.7	8.4	9.6	10.6	11.7	14.0	16.3	18.4	19.6
950	1841	2.1	3.7	5.5	7.3	8.7	10.3	13.7	17.0	20.1	21.9
900	2133	1.2	3.0	4.9	6.9	8.4	10.2	13.8	17.4	20.7	23.7
850	4918	0.9	2.5	4.3	6.1	7.5	9.1	12.5	15.9	18.9	21.6
800	6548	-0.4	1.1	2.8	4.6	5.7	7.2	10.7	13.4	16.2	19.5
750	8317	-2.2	-0.8	-0.7	2.2	1.4	4.6	7.6	10.4	13.0	14.5
700	10174	-4.6	-3.3	-1.9	-0.5	-0.6	1.9	4.5	7.1	8.4	10.9
650	12316	-7.6	-6.6	-5.1	-3.8	-2.8	-1.6	-0.8	3.2	4.4	6.7
600	14212	-11.6	-10.4	-9.1	-7.9	-6.9	-5.7	-3.4	-1.1	1.1	2.3
550	16440	-15.8	-13.5	-12.3	-11.4	-11.4	-10.3	-8.1	-5.9	-3.9	-1.5
500	18815	-20.5	-19.5	-18.4	-17.3	-16.4	-15.6	-13.7	-11.2	-9.3	-7.1
450	21170	-25.9	-24.9	-23.9	-22.8	-22.0	-21.0	-19.1	-17.2	-16.2	-15.4
400	24314	-32.4	-31.4	-30.5	-29.4	-28.6	-27.6	-25.4	-23.6	-22.6	-20.7
350	27644	-39.4	-38.4	-37.4	-36.6	-36.0	-35.1	-33.2	-31.3	-30.4	-29.5
300	30911	-47.0	-46.2	-45.3	-44.5	-43.4	-43.0	-41.4	-39.8	-39.0	-38.3
250	34918	-54.7	-53.9	-53.0	-52.4	-51.6	-50.1	-48.6	-47.8	-46.3	-45.5
200	39616	-66.1	-65.3	-63.8	-62.5	-61.5	-60.3	-57.9	-55.5	-53.3	-52.0
175	42314	-69.4	-68.1	-66.6	-65.1	-63.9	-62.5	-59.7	-56.9	-55.5	-52.0
150	45515	-65.4	-67.2	-65.9	-64.5	-63.5	-62.3	-59.8	-56.1	-53.1	-50.4
125	49215	-67.7	-66.7	-65.6	-64.5	-63.7	-62.7	-60.7	-58.7	-56.7	-53.7
100	53113	-68.9	-67.9	-66.5	-65.8	-65.0	-64.0	-62.1	-60.2	-59.2	-57.3
80	58114	-68.6	-67.7	-66.7	-65.8	-65.0	-64.1	-62.3	-60.5	-59.6	-57.9
70	61014	-66.9	-66.1	-65.2	-64.4	-63.7	-62.9	-61.2	-59.7	-58.9	-56.9
60	64110	-64.9	-64.2	-63.4	-62.6	-62.0	-61.3	-59.8	-58.3	-57.6	-55.5
51	67917	-62.8	-62.1	-61.3	-60.5	-59.9	-59.2	-57.7	-56.2	-55.5	-54.1
40	72666	-56.8	-59.1	-58.3	-57.6	-57.0	-56.3	-54.9	-53.5	-52.8	-51.5
30	78552	-53.4	-55.7	-54.9	-54.2	-53.6	-52.9	-51.5	-50.1	-49.4	-48.8
25	82552	-54.4	-53.7	-52.9	-52.2	-51.6	-50.9	-49.5	-48.1	-47.4	-46.8
20	87112	-51.9	-51.1	-50.3	-49.5	-48.9	-48.2	-46.7	-45.2	-44.5	-43.1
15	93615	-48.9	-48.1	-47.3	-46.6	-45.4	-45.0	-43.5	-42.0	-41.2	-40.6
10	102417	-45.1	-44.2	-43.2	-42.2	-41.4	-40.5	-38.6	-36.7	-35.8	-34.0
7	11.0755	-41.7	-40.6	-39.4	-38.2	-37.2	-36.1	-33.9	-31.5	-30.4	-28.2

Table 114. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: June

NO. OBSERVATIONS -- SURFACE = 755. TOP = 316

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)						97.73 +250	99.0 +250
		1.0 -250	2.0 -150	5.0 -100	10.0 -50	25.0 0	50.0 +50		
SFC	571	7.7	8.7	9.8	10.9	11.7	12.7	14.7	16.7
950	141	2.4	6.4	10.0	11.6	15.6	19.4	21.2	22.8
900	3310	4.0	6.6	8.4	10.3	12.0	14.0	16.0	22.0
850	4915	4.1	5.9	7.9	9.9	11.5	13.3	17.1	20.9
800	6611	3.4	5.6	6.8	8.5	9.9	11.5	14.3	18.1
750	8374	1.9	3.3	4.8	6.4	7.4	9.0	11.9	14.8
700	10262	-0.3	1.6	2.4	3.7	4.6	6.1	8.6	11.1
650	12251	-3.4	-2.4	-1.1	-0.2	-1.2	-2.4	-4.4	-7.2
600	14360	-7.2	-6.1	-4.9	-3.7	-2.7	-1.6	-0.7	3.0
550	16647	-11.6	-10.5	-9.3	-8.1	-7.2	-6.1	-5.9	-1.7
500	18970	-16.8	-15.7	-14.5	-13.4	-12.5	-11.4	-9.3	-7.2
450	21732	-22.1	-21.1	-20.1	-19.9	-18.2	-17.2	-15.3	-13.4
400	24619	-28.6	-27.4	-26.6	-25.5	-24.7	-23.7	-21.8	-20.6
350	27799	-35.8	-34.9	-33.9	-32.9	-32.1	-31.2	-29.3	-27.4
300	31345	-43.5	-42.7	-41.8	-40.9	-40.2	-39.4	-37.7	-36.0
250	35390	-52.3	-51.5	-50.6	-49.8	-49.1	-48.3	-46.7	-45.1
200	40148	-62.3	-61.3	-60.3	-59.2	-58.4	-57.5	-55.5	-53.6
175	42017	-66.9	-65.6	-64.6	-63.4	-62.4	-61.3	-59.7	-56.7
150	46063	-70.0	-68.4	-67.5	-66.2	-65.2	-64.0	-61.6	-59.2
125	49747	-72.8	-71.4	-70.3	-68.9	-67.9	-66.7	-64.2	-61.7
100	52879	-73.4	-72.2	-70.9	-69.7	-68.7	-67.5	-65.2	-62.9
80	56615	-70.3	-69.3	-68.3	-67.2	-66.4	-65.5	-63.5	-61.6
70	61338	-67.0	-66.7	-65.7	-64.5	-63.9	-63.1	-61.6	-59.3
60	65517	-63.7	-63.1	-62.4	-61.7	-61.2	-60.6	-59.3	-57.4
50	68334	-60.4	-60.7	-59.6	-59.0	-58.5	-57.9	-55.7	-53.7
40	72876	-57.1	-56.5	-55.9	-55.5	-55.0	-53.9	-52.3	-50.7
30	79044	-54.1	-53.5	-52.9	-52.3	-51.7	-50.7	-49.3	-47.7
25	83012	-52.1	-51.6	-51.0	-50.4	-50.0	-49.5	-47.3	-45.8
20	87658	-50.0	-49.4	-48.8	-48.1	-47.6	-47.0	-45.6	-43.5
15	91446	-47.1	-46.4	-45.6	-44.9	-44.3	-43.6	-42.2	-40.8
10	103291	-43.2	-42.4	-41.5	-40.6	-39.9	-39.1	-35.7	-34.2
7	111411	-39.6	-38.4	-37.5	-36.4	-35.6	-34.6	-30.6	-28.8

Table 115. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: July
NO. OBSERVATIONS -- SURFACE = 795. TOP = 351

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT.)	1000' MATURED TEMPERATURES (DEGREES CELSIUS)									
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 +150	84.13 +150	90.0 +150
SFC	571	8.6	9.7	10.9	12.1	13.1	14.2	16.5	18.8	19.9	22.1
950	1837	8.3	10.0	11.8	13.7	15.1	16.8	20.2	23.6	26.7	23.3
900	3369	15.9	16.9	16.0	19.1	20.0	21.0	23.1	25.2	27.1	32.1
850	5050	15.4	16.3	17.3	18.2	19.0	19.9	21.7	23.5	26.2	30.3
800	6713	13.4	14.2	15.0	15.9	16.5	17.3	20.3	24.4	25.2	28.0
750	8514	10.6	11.3	12.0	12.7	13.3	14.0	15.3	16.6	21.7	22.6
700	10420	7.2	7.8	6.4	9.1	9.6	10.2	11.4	12.6	13.2	17.9
650	12431	2.8	3.4	4.0	4.7	5.2	5.8	7.0	8.2	8.8	14.6
600	14577	-1.7	-1.1	-0.5	-0.2	-0.7	-1.3	-2.3	-3.7	-4.3	10.0
550	16854	-6.5	-5.9	-5.3	-4.6	-4.1	-3.5	-2.1	-1.1	-0.5	6.1
500	19321	-11.5	-10.9	-10.3	-9.6	-9.1	-8.5	-7.3	-6.1	-5.5	1.3
450	21942	-17.3	-16.7	-16.0	-15.3	-14.5	-14.2	-12.9	-11.6	-11.0	-3.7
400	24848	-23.5	-22.9	-22.2	-21.5	-21.0	-20.4	-19.0	-17.6	-17.2	-9.8
350	28114	-31.1	-30.4	-29.6	-28.8	-28.2	-27.5	-26.0	-24.5	-23.8	-15.3
300	31713	-39.7	-38.9	-38.1	-37.2	-36.6	-35.8	-34.3	-32.8	-32.0	-22.4
250	35817	-48.2	-47.5	-46.7	-46.0	-45.4	-44.7	-43.3	-41.9	-32.0	-21.6
200	40660	-57.6	-57.0	-56.3	-55.6	-55.1	-54.5	-53.2	-51.9	-41.6	-20.9
175	43426	-63.2	-62.5	-61.8	-61.1	-60.5	-59.8	-58.5	-57.2	-56.5	-29.7
150	46546	-69.4	-68.6	-67.7	-66.9	-66.2	-65.4	-63.6	-62.2	-61.4	-50.5
125	50197	-73.9	-73.0	-72.1	-71.1	-70.4	-69.5	-67.6	-66.1	-65.2	-44.7
100	54593	-73.5	-72.7	-71.8	-71.0	-70.3	-69.5	-67.9	-66.3	-65.5	-62.0
80	59032	-69.2	-68.5	-67.7	-67.0	-66.4	-65.7	-64.3	-62.9	-62.2	-63.1
70	61726	-66.2	-65.6	-65.0	-64.2	-63.7	-63.1	-61.8	-60.5	-60.2	-60.1
60	64879	-63.7	-63.1	-62.5	-61.9	-61.4	-60.8	-59.7	-58.6	-57.5	-56.7
50	68652	-59.9	-59.4	-58.9	-58.3	-57.9	-57.4	-56.4	-55.4	-54.9	-53.4
40	73333	-57.1	-56.6	-56.1	-55.5	-55.1	-54.6	-53.6	-52.6	-52.1	-51.1
30	79452	-54.0	-53.5	-52.9	-52.3	-51.9	-51.4	-50.9	-49.2	-48.7	-47.7
25	83373	-52.3	-51.7	-51.1	-50.5	-50.0	-49.4	-48.3	-47.2	-46.6	-45.5
20	88222	-49.2	-49.6	-48.9	-48.2	-47.7	-47.1	-45.8	-44.5	-43.9	-42.7
15	94554	-47.4	-46.7	-45.9	-45.2	-44.6	-43.9	-42.5	-41.1	-40.4	-39.8
10	103629	-43.7	-42.8	-41.9	-40.9	-40.2	-39.3	-37.6	-35.9	-35.0	-33.3
7	111729	-40.4	-39.4	-38.3	-37.2	-36.3	-35.3	-33.2	-31.2	-30.1	-28.1

Table 118. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: August
NO. OBSERVATIONS -- SURFACE = A30. TOP = 338

PRESSURE LEVEL (INRS)	MEAN (F)	TEMPERATURE (DEGREES CELSIUS)									
		1.0	2.24	5.0	10.0	15.45	25.0	30.0	35.0	40.0	50.0
SFC	571	9.4	10.7	11.9	13.1	14.1	15.2	17.4	19.6	20.9	23.1
950	1617	8.0	10.4	11.9	13.7	15.7	16.9	20.4	23.9	27.1	28.9
900	3371	13.3	14.7	16.2	17.7	18.4	20.2	22.9	25.6	27.0	28.1
850	5000	13.4	14.5	15.7	16.9	17.9	19.0	21.1	23.6	24.7	25.7
800	6709	11.9	12.8	13.6	14.8	15.6	16.5	18.4	20.3	21.2	22.0
750	8507	9.2	10.5	10.9	11.7	12.4	13.2	14.5	16.4	17.2	17.9
700	10413	6.0	6.7	7.5	8.2	8.8	9.5	10.9	12.3	13.0	14.3
650	12414	2.0	2.7	3.4	4.1	4.7	5.4	6.7	8.0	8.7	9.3
600	14564	-2.4	-1.7	-1.0	-0.3	-1.0	-2.3	-3.6	-4.3	-4.9	-5.6
550	16841	-6.0	-6.2	-5.5	-4.8	-4.2	-3.5	-2.2	-0.9	-0.2	-1.1
500	19311	-11.9	-11.2	-10.5	-9.8	-9.2	-8.5	-7.2	-5.9	-5.2	-4.6
450	21949	-17.3	-16.7	-16.0	-15.3	-14.6	-14.2	-12.9	-12.0	-11.0	-10.5
400	24848	-23.5	-22.9	-22.2	-21.5	-21.0	-20.4	-19.1	-17.8	-17.2	-16.7
350	28170	-31.4	-30.7	-29.9	-29.1	-28.5	-27.8	-26.3	-24.8	-24.1	-23.5
300	31696	-40.1	-39.1	-39.5	-37.6	-37.0	-36.2	-34.7	-33.2	-32.4	-31.5
250	35791	-49.2	-48.4	-48.6	-46.7	-46.1	-45.3	-43.4	-42.3	-41.5	-40.9
200	40620	-58.1	-57.5	-56.6	-56.1	-55.0	-53.7	-52.4	-51.6	-51.3	-50.6
175	43343	-63.0	-62.4	-61.8	-61.1	-60.4	-59.1	-58.1	-57.6	-57.0	-56.5
150	46522	-69.2	-68.4	-67.6	-66.7	-66.1	-65.3	-63.5	-62.3	-61.5	-60.9
125	50157	-74.6	-73.6	-72.5	-71.4	-70.6	-69.6	-67.6	-65.6	-64.6	-63.8
100	54547	-74.4	-73.6	-72.4	-71.3	-70.5	-69.5	-67.6	-65.7	-64.7	-63.9
80	59013	-69.2	-68.4	-67.7	-66.9	-66.3	-65.6	-64.1	-62.6	-61.9	-60.5
70	61726	-65.7	-65.1	-64.5	-63.8	-63.3	-62.7	-61.5	-60.3	-59.7	-59.2
60	64842	-62.4	-62.1	-61.5	-60.9	-60.5	-60.0	-58.9	-57.8	-56.9	-55.7
50	68016	-59.4	-59.3	-59.6	-59.3	-57.9	-57.4	-56.5	-55.6	-54.7	-53.7
40	73312	-57.4	-56.9	-56.6	-55.8	-55.4	-54.9	-53.9	-52.9	-52.4	-51.4
30	79419	-54.2	-53.7	-53.2	-52.6	-52.2	-51.7	-50.7	-49.7	-48.8	-47.2
25	83312	-53.1	-52.5	-51.9	-51.2	-50.7	-50.1	-48.9	-47.7	-47.1	-46.6
20	86151	-51.2	-50.5	-50.8	-49.1	-48.5	-47.8	-46.5	-45.2	-44.5	-43.9
15	94472	-47.9	-47.1	-46.3	-45.7	-45.0	-44.7	-43.5	-42.0	-41.3	-40.7
10	1019514	-45.1	-44.2	-43.3	-42.3	-41.6	-40.7	-39.6	-37.3	-35.7	-34.1
7	11574	-41.1	-39.4	-39.4	-37.6	-37.6	-36.7	-34.6	-32.0	-31.2	-30.2

Table 117. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: September
 NO. OBSERVATIONS == SURFACE == 800, TOP == 336

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT.)	10 MPH WIND (DEGREES CELSIUS)										95.0 +150	97.73 +250	99.0 +350
		1.0	2.25	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0			
SFC	571	9.3	10.5	11.8	13.1	14.1	15.3	17.7	20.1	21.3	22.5	23.6	24.9	26.1
950	18.4	6.0	7.0	9.8	11.8	13.3	15.1	16.7	22.5	24.3	25.8	27.8	29.8	31.6
900	33.0	9.1	10.7	12.4	14.2	15.5	17.1	20.3	23.5	25.1	26.4	28.2	29.9	31.5
850	49.4	9.5	10.8	12.2	13.7	14.8	16.1	16.6	21.5	22.8	23.9	25.4	26.8	28.1
800	66.7	8.5	10.7	11.9	12.8	13.9	16.3	16.9	19.4	20.3	21.5	22.7	23.6	
750	84.2	6.1	7.2	8.2	9.2	10.0	10.9	12.8	14.7	15.6	16.4	17.4	18.4	
700	103.15	3.2	4.1	5.0	6.0	6.7	7.6	9.3	11.0	11.9	12.6	13.6	14.5	
650	123.0	-0.6	-1.7	1.2	2.2	2.9	3.8	5.5	7.2	8.1	8.8	9.8	10.7	
600	144.6	-4.3	-3.5	-2.6	-1.7	-1.0	-0.2	1.5	3.2	4.0	4.7	5.6	6.5	
550	161.6	-8.5	-7.7	-6.9	-6.0	-5.4	-4.6	-3.1	-1.6	-0.6	-0.2	-0.2	-1.5	
500	191.7	-13.3	-12.6	-11.8	-11.0	-10.4	-9.7	-8.2	-6.7	-5.4	-4.6	-3.8	-3.1	
450	210.2	-16.1	-17.4	-16.7	-16.1	-15.4	-14.7	-13.2	-12.8	-12.1	-11.5	-10.8	-10.1	
400	247.25	-25.2	-22.5	-23.8	-22.1	-20.5	-21.6	-20.5	-19.2	-18.5	-17.9	-17.2	-16.5	-15.8
350	279.22	-32.8	-32.1	-31.3	-30.6	-29.3	-29.3	-27.9	-26.5	-25.8	-25.2	-24.5	-23.7	-23.0
300	316.93	-41.5	-40.8	-40.0	-39.2	-38.5	-37.7	-36.2	-34.7	-33.3	-32.4	-31.3	-30.8	
250	355.14	-50.7	-49.9	-49.0	-48.1	-47.4	-46.6	-45.9	-43.2	-42.4	-41.7	-40.8	-39.9	
200	403.9	-59.7	-58.0	-57.1	-56.4	-55.6	-53.9	-52.2	-51.4	-50.7	-49.8	-48.9	-48.1	
175	431.0	-63.4	-62.2	-61.3	-60.7	-59.9	-58.4	-56.9	-56.1	-55.5	-54.6	-53.5	-53.0	
150	463.3	-68.1	-67.3	-66.4	-65.5	-64.8	-64.0	-62.3	-60.6	-59.8	-58.2	-57.3	-56.5	
125	493.1	-73.2	-72.6	-71.6	-70.5	-69.7	-68.7	-66.8	-64.9	-63.9	-62.1	-61.0	-60.0	
100	543.37	-74.4	-73.3	-72.3	-71.3	-70.5	-69.6	-67.7	-65.8	-64.9	-63.1	-62.1	-61.2	
80	584.6	-70.6	-69.4	-68.9	-68.1	-67.4	-66.6	-65.0	-63.4	-62.6	-61.9	-60.2	-59.4	
70	616.53	-67.7	-67.0	-66.2	-65.4	-64.6	-64.1	-62.6	-61.1	-60.4	-59.0	-58.2	-57.5	
60	645.3	-65.1	-64.4	-63.6	-62.8	-62.2	-61.5	-60.5	-58.5	-57.8	-56.4	-55.6	-54.9	
50	683.0	-62.2	-61.5	-60.8	-60.1	-59.5	-58.8	-57.5	-56.2	-55.5	-54.9	-54.2	-53.5	
40	730.2	-59.3	-58.7	-58.0	-57.3	-56.8	-56.2	-55.8	-53.6	-53.0	-51.8	-51.1	-50.5	
30	790.5	-56.1	-55.5	-54.8	-54.1	-53.5	-53.0	-51.7	-50.4	-49.8	-49.3	-48.6	-47.9	
25	829.2	-54.6	-53.7	-53.0	-52.3	-51.7	-51.0	-49.7	-48.4	-47.7	-46.1	-45.7	-45.0	
20	877.5	-52.6	-51.8	-51.0	-50.3	-49.7	-49.0	-47.6	-46.2	-45.5	-44.9	-44.2	-43.4	
15	940.4	-49.5	-48.7	-48.0	-47.2	-46.4	-45.7	-44.9	-43.4	-42.6	-41.1	-40.3	-39.5	
10	1030.8	-47.6	-46.7	-45.7	-44.9	-44.0	-43.1	-41.3	-39.5	-37.8	-36.9	-35.9	-35.0	
7	1110.1	-45.6	-44.4	-43.2	-42.0	-41.0	-39.9	-37.6	-35.3	-33.2	-32.0	-30.8	-29.7	

Table 118. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island: October

NO. OBSERVATIONS = SURFACE = 806, TOP = 383

PRESSURE LEVEL (inches)	MEAN HEIGHT (feet)	TEMPERATURE										MEAN	+1SD	-1SD
		10.0	2.2a	5.0	10.0	15.0	-15.0	25.0	50.0	75.0	90.0			
SFC	5.71	8.1	9.4	11.0	12.5	13.6	14.9	17.6	20.5	21.6	22.7	24.2	25.6	26.7
950	1857	6.2	7.0	9.8	11.7	13.2	14.9	18.5	22.1	23.8	25.3	27.2	29.1	30.6
900	3376	6.5	8.1	9.9	11.7	13.1	14.8	18.1	21.5	23.1	24.5	26.3	28.1	29.8
850	4974	5.4	7.1	9.9	10.5	11.7	13.2	16.1	19.0	20.5	21.7	23.3	24.9	26.4
800	6656	4.0	5.3	6.7	8.2	9.3	10.6	13.7	16.0	17.3	18.4	19.9	21.3	22.6
750	8222	1.2	2.4	3.9	5.2	6.3	7.6	10.1	12.6	13.9	15.0	16.3	17.1	19.0
700	10245	-1.4	-0.6	-1.7	2.1	-1.1	4.3	6.8	9.3	10.5	11.5	12.9	14.2	15.4
650	12274	-5.2	-4.0	-2.7	-1.9	-0.4	-1.6	3.2	5.6	6.8	7.8	9.1	10.4	11.6
600	14340	-8.6	-7.4	-6.4	-5.2	-4.2	-3.1	-0.6	1.5	2.6	3.6	4.8	6.0	7.1
550	16640	-13.6	-12.1	-10.9	-9.7	-8.6	-7.7	-5.5	-3.3	-2.2	-1.3	-0.1	1.1	2.2
500	19674	-18.1	-17.1	-16.0	-14.9	-13.0	-12.0	-10.0	-8.8	-7.4	-6.9	-4.7	-3.7	-3.7
450	21699	-23.4	-22.8	-20.4	-21.7	-20.4	-19.4	-16.8	-14.8	-13.6	-13.0	-10.8	-9.8	-9.8
400	24579	-30.0	-29.6	-28.0	-26.9	-26.0	-25.1	-23.2	-21.3	-20.1	-19.5	-18.4	-17.4	-16.4
350	27719	-37.4	-36.5	-34.5	-34.5	-33.7	-32.8	-30.9	-29.0	-28.1	-27.3	-26.3	-25.3	-24.4
300	31257	-44.7	-43.9	-43.0	-42.2	-41.5	-40.7	-39.1	-37.5	-36.7	-35.2	-34.3	-33.5	-33.5
250	32242	-54.1	-53.2	-52.2	-51.2	-50.4	-49.5	-47.6	-45.7	-44.8	-44.0	-43.0	-42.0	-41.1
200	40024	-61.5	-62.4	-61.2	-60.0	-59.0	-57.9	-55.5	-53.3	-52.2	-51.2	-50.0	-48.8	-47.7
175	42142	-66.5	-65.5	-64.3	-63.2	-62.3	-61.2	-59.1	-57.0	-55.9	-55.0	-53.9	-52.7	-51.6
150	49518	-69.5	-68.6	-67.5	-66.4	-65.6	-64.6	-62.6	-60.6	-59.6	-58.8	-57.7	-56.6	-55.6
125	49536	-72.7	-71.7	-70.7	-69.8	-68.8	-67.8	-65.7	-63.7	-62.2	-61.1	-60.1	-59.1	-59.1
100	56116	-75.4	-74.3	-73.1	-72.0	-71.1	-70.0	-67.9	-65.9	-64.7	-63.8	-62.7	-61.5	-60.4
80	58425	-72.9	-72.0	-71.0	-70.0	-69.2	-68.3	-66.4	-65.5	-63.6	-62.8	-61.8	-60.8	-59.9
70	61006	-70.3	-69.5	-68.6	-67.7	-67.0	-66.2	-64.5	-62.8	-61.0	-60.3	-59.5	-58.7	-58.7
60	6139	-67.7	-66.8	-66.1	-65.2	-64.6	-63.8	-62.3	-60.8	-59.4	-58.5	-57.7	-56.9	-56.9
50	67920	-64.7	-64.0	-63.2	-62.5	-61.9	-61.2	-59.8	-58.4	-57.7	-57.1	-56.4	-55.6	-54.9
40	72523	-61.9	-61.2	-60.4	-59.7	-59.1	-58.2	-57.0	-55.6	-54.9	-54.3	-53.6	-52.8	-52.1
30	78547	-51.7	-51.0	-50.3	-50.3	-50.7	-50.7	-49.4	-48.4	-47.7	-47.1	-46.4	-45.7	-45.0
20	82416	-57.0	-56.3	-55.5	-55.5	-55.7	-55.1	-53.4	-51.9	-50.4	-49.7	-48.3	-47.5	-46.8
15	83779	-55.2	-54.4	-53.5	-52.7	-52.0	-51.4	-49.6	-47.9	-46.5	-45.7	-44.9	-44.1	-44.1
10	102215	-51.7	-50.6	-49.4	-48.2	-47.3	-46.2	-44.0	-41.8	-40.7	-39.8	-38.6	-37.4	-36.3
7	110047	-49.0	-47.8	-46.5	-45.2	-44.7	-43.0	-40.8	-38.0	-37.0	-36.0	-34.7	-33.4	-32.2

Table 119. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for San Nicolas Island: November

NO. OBSERVATIONS -- SURFACE = 752. TOP = 326

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	TEMPERATURE (IN DEGREES CELSIUS)									
		1.0			2.0			5.0			10.0
		15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	50.0	75.0
SFC	571	7.4	8.5	9.7	10.9	11.9	13.0	15.3	17.6	18.7	19.7
950	19n0	3.9	5.5	7.2	8.9	10.2	11.8	14.9	18.0	19.6	20.9
900	33o9	2.0	3.6	5.4	7.1	6.5	10.1	13.4	16.7	18.3	19.7
850	497n	-0.2	1.4	3.2	4.9	6.3	7.9	11.2	14.5	16.1	17.5
800	6624	-2.5	-0.9	.8	2.6	3.9	5.5	8.7	11.9	13.5	14.8
750	8366	-4.9	-3.3	-1.6	-2.1	-1.4	3.0	6.1	9.2	10.8	12.1
700	10210	-7.5	-6.0	-4.4	-2.8	-1.5	-0.0	3.0	6.0	7.5	8.8
650	12162	-10.5	-9.1	-7.6	-6.0	-4.8	-3.4	-0.5	2.4	3.8	5.0
600	14249	-14.0	-12.6	-11.1	-9.6	-8.5	-7.1	-4.4	-1.7	-0.3	.8
550	16470	-18.0	-16.7	-15.3	-13.9	-12.8	-11.5	-8.9	-6.3	-5.0	-3.9
500	18878	-22.9	-21.6	-20.2	-18.9	-17.8	-16.5	-14.0	-11.5	-10.2	-9.1
450	21467	-28.0	-26.8	-25.5	-24.2	-23.2	-22.0	-19.6	-17.2	-16.0	-15.0
400	24308	-34.2	-33.0	-31.7	-30.5	-29.5	-28.3	-26.0	-23.7	-22.5	-21.5
350	27434	-40.8	-39.7	-38.5	-37.4	-36.5	-35.4	-33.3	-31.2	-30.1	-29.2
300	30925	-47.7	-46.8	-45.8	-44.9	-44.1	-43.2	-41.4	-39.6	-38.7	-37.9
250	36911	-56.8	-55.8	-54.7	-53.6	-52.6	-51.8	-49.8	-47.8	-46.8	-45.9
200	39610	-66.7	-65.4	-64.0	-62.5	-61.4	-60.1	-57.4	-54.7	-53.4	-52.3
175	42356	-70.0	-68.6	-67.1	-66.6	-64.4	-63.0	-60.7	-57.4	-54.8	-53.1
150	45492	-72.0	-70.7	-69.3	-67.8	-66.7	-65.4	-62.7	-60.0	-58.7	-57.6
125	49157	-74.4	-73.1	-71.7	-70.3	-69.2	-67.9	-65.3	-62.7	-61.4	-60.3
100	53593	-75.9	-74.6	-73.2	-71.9	-70.8	-69.5	-67.0	-64.5	-63.2	-62.1
80	58028	-74.7	-72.5	-71.0	-70.0	-69.0	-66.5	-64.2	-63.0	-62.0	-60.8
70	60576	-72.1	-71.1	-70.0	-68.9	-68.1	-67.1	-65.1	-63.1	-62.1	-61.3
60	63170	-69.3	-68.5	-67.6	-66.7	-66.0	-65.2	-63.5	-61.8	-60.7	-60.3
50	67457	-66.7	-66.0	-65.2	-64.5	-63.9	-63.2	-61.4	-60.4	-59.7	-59.1
40	72011	-64.4	-63.7	-63.0	-62.3	-61.7	-61.0	-59.7	-58.4	-57.7	-57.1
30	77949	-62.2	-61.4	-60.6	-59.7	-59.1	-58.3	-56.8	-55.3	-54.5	-53.9
25	81145	-61.4	-60.5	-59.5	-58.6	-57.8	-56.9	-55.1	-53.3	-52.4	-51.6
20	86444	-59.8	-58.8	-57.8	-56.7	-55.9	-54.9	-53.0	-51.1	-50.1	-49.3
15	92566	-57.9	-56.8	-55.6	-54.4	-53.5	-52.4	-50.2	-48.0	-46.9	-45.2
10	101319	-55.6	-54.3	-52.9	-51.5	-50.4	-49.1	-46.5	-43.9	-42.6	-41.5
7	109140	-53.1	-51.7	-50.2	-48.7	-47.5	-46.1	-43.3	-40.5	-39.1	-37.9

Table 120. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for San Nicolas Island December

NO. OBSERVATIONS -- SURFACE = 463. TOP = 278

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)									
		-1.0	2.2a	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
SFC	571	5.7	6.0	9.1	10.0	11.1	13.2	15.3	16.4	17.3	18.4
950	1900	2.6	4.1	5.8	7.4	8.7	10.2	13.3	16.4	17.9	19.6
900	3346	-0.1	1.5	3.3	5.1	6.5	8.1	11.5	14.9	16.5	17.5
850	4948	-2.7	-1.0	.8	2.7	4.1	5.8	9.2	12.6	14.3	15.7
800	6598	-5.0	-3.3	-1.5	-2.4	-1.8	3.5	6.9	10.3	12.0	13.4
750	5317	-7.2	-5.6	-3.8	-2.1	-0.7	.9	4.2	7.5	9.1	10.5
700	10151	-10.0	-8.4	-6.7	-4.9	-3.6	-2.0	1.2	4.4	6.0	7.3
650	12047	-13.6	-11.5	-9.8	-8.2	-6.9	-5.4	-2.3	.8	2.3	3.6
600	14140	-16.9	-15.4	-13.3	-12.2	-10.9	-9.4	-6.4	-3.4	-1.9	1.0
550	16365	-20.9	-19.5	-18.0	-16.4	-15.2	-14.8	-10.9	-8.0	-6.6	-5.4
500	18757	-25.2	-23.9	-22.5	-21.0	-19.9	-18.6	-15.9	-13.2	-11.9	-10.8
450	21322	-30.4	-29.1	-27.7	-26.4	-25.3	-24.0	-21.5	-19.6	-17.7	-16.6
400	24147	-36.5	-35.1	-34.0	-32.6	-31.6	-30.4	-27.9	-25.4	-24.2	-23.2
350	27244	-43.1	-42.0	-40.8	-39.6	-39.6	-37.5	-35.2	-32.9	-31.8	-30.9
300	30712	-50.6	-49.5	-48.3	-47.2	-46.3	-45.2	-43.1	-41.0	-39.9	-39.0
250	34662	-59.7	-58.5	-57.2	-56.0	-55.0	-53.9	-51.5	-49.2	-47.0	-45.8
200	39337	-69.0	-67.4	-65.7	-63.9	-62.5	-61.0	-57.8	-54.6	-53.0	-51.7
175	42047	-71.2	-69.5	-67.7	-65.9	-64.5	-62.8	-59.5	-56.2	-53.1	-51.5
150	45240	-71.0	-69.6	-68.1	-66.5	-65.3	-63.9	-61.0	-58.1	-56.7	-55.5
125	48934	-73.0	-71.6	-70.1	-68.6	-67.5	-66.1	-63.4	-60.7	-59.3	-58.2
100	53052	-76.0	-74.5	-72.9	-71.3	-70.1	-68.6	-65.7	-62.8	-60.1	-58.5
80	57844	-75.8	-74.4	-72.9	-71.4	-70.2	-69.8	-66.8	-63.2	-61.0	-59.1
70	60505	-73.0	-72.5	-71.2	-69.8	-68.4	-67.6	-65.1	-62.6	-61.4	-59.0
60	63296	-71.0	-70.5	-68.9	-67.8	-66.9	-65.9	-63.8	-61.7	-60.7	-58.7
50	67200	-66.1	-67.2	-66.3	-65.3	-64.6	-63.7	-62.0	-60.3	-59.4	-58.7
40	71024	-65.8	-65.0	-64.1	-63.3	-62.6	-61.8	-60.2	-58.6	-57.6	-56.3
30	777.9	-63.9	-63.0	-62.0	-61.0	-60.2	-59.3	-57.4	-55.5	-53.8	-52.8
25	81515	-63.7	-62.6	-61.4	-60.2	-59.3	-58.2	-56.0	-53.8	-52.2	-51.8
20	86217	-63.3	-62.0	-60.6	-59.2	-58.1	-56.8	-54.2	-51.6	-50.3	-49.6
15	92237	-62.0	-60.5	-58.9	-57.3	-56.1	-54.6	-51.7	-48.8	-46.1	-44.5
10	100458	-58.9	-57.4	-55.7	-54.1	-52.8	-51.3	-49.1	-45.6	-42.3	-39.0
7	108720	-56.8	-55.0	-53.0	-51.0	-49.1	-47.7	-44.0	-40.3	-38.5	-35.0

Table 121. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for Point Mugu, California: Annual

NO. OBSERVATIONS = 5446 \times 4611 = 109 \pm 118

PRESSURE LEVEL (MBSI)	MEAN HEIGHT (FT.)	IMPROVEMENT IN HUMIDITY CELLS (%)									
		1.0			2.2A			5.0			10.0
		-2SD	0	+2SD	-1SD	0	+1SD	-1SD	0	+1SD	-1SD
SFC	13	4.2	5.7	7.4	9.0	10.3	11.8	14.0	16.0	19.5	20.6
1000	449	5.7	7.0	8.4	9.8	10.9	12.2	14.8	17.4	18.7	19.8
900	1877	1.7	3.6	5.7	7.0	9.3	11.0	15.0	16.8	20.7	22.3
850	3376	-1.4	.7	3.2	5.7	7.7	10.0	15.0	17.4	21.7	24.3
800	4957	-3.4	-1.2	1.4	4.0	6.0	8.4	13.2	18.0	20.4	23.7
750	6621	-5.3	-3.0	-0.5	2.0	3.9	6.2	10.8	15.4	17.7	22.1
700	8376	-7.4	-5.3	-3.0	-0.6	1.2	3.3	7.7	12.1	14.2	21.1
650	10226	-9.9	-7.9	-5.7	-3.5	-1.9	0.2	4.3	8.4	10.4	12.1
600	12192	-12.4	-10.9	-8.8	-6.7	-5.1	-3.0	-0.7	4.6	6.5	8.1
550	14295	-16.7	-14.8	-12.7	-10.7	-9.1	-7.2	-3.4	-4	2.3	3.9
500	16522	-20.7	-18.9	-16.9	-14.9	-12.4	-11.6	-7.9	-6.3	-2.4	-0.4
450	18934	-25.5	-23.7	-21.8	-19.8	-18.3	-16.3	-12.9	-10.3	-5.3	-0.6
400	21549	-30.9	-29.4	-27.3	-25.4	-23.9	-22.2	-18.6	-15.0	-13.3	-1.3
350	24300	-37.2	-35.5	-33.6	-31.7	-30.2	-28.5	-24.9	-21.3	-19.6	-1.6
300	27513	-44.3	-42.6	-40.8	-38.9	-37.4	-35.8	-32.4	-29.0	-27.3	-16.1
250	31017	-51.6	-50.0	-48.3	-46.5	-45.2	-43.6	-40.4	-37.2	-35.6	-32.4
200	35013	-60.0	-58.4	-56.7	-55.0	-53.7	-52.1	-49.0	-45.9	-44.3	-41.3
175	39741	-67.0	-65.5	-63.8	-62.2	-60.9	-59.4	-56.3	-53.2	-50.4	-39.6
150	42507	-68.6	-67.2	-65.7	-64.1	-62.9	-61.5	-58.7	-55.7	-52.4	-45.6
125	45666	-70.7	-69.3	-67.8	-66.3	-65.1	-63.7	-60.9	-58.1	-55.5	-48.6
100	49340	-73.4	-72.3	-70.7	-69.1	-67.8	-66.3	-63.3	-60.8	-58.8	-52.5
80	53819	-74.7	-73.3	-71.8	-70.2	-69.0	-67.6	-64.7	-61.8	-59.4	-54.7
70	58314	-72.4	-71.1	-69.7	-68.4	-67.3	-66.0	-63.5	-61.0	-59.7	-55.9
60	61007	-70.0	-68.9	-67.7	-66.5	-64.4	-62.1	-59.8	-57.7	-56.3	-54.2
50	64100	-68.0	-66.9	-65.7	-64.1	-62.9	-61.5	-58.7	-56.7	-54.3	-52.6
40	67897	-66.1	-65.0	-63.8	-62.6	-61.6	-60.5	-58.1	-56.7	-54.8	-51.4
30	72523	-64.1	-62.9	-61.6	-60.3	-59.3	-58.1	-55.7	-53.3	-52.1	-49.8
25	82008	-60.0	-60.7	-59.3	-57.8	-56.7	-55.4	-52.7	-50.0	-48.7	-47.3
20	87142	-59.4	-59.1	-57.7	-56.2	-55.1	-53.8	-51.1	-49.4	-47.1	-43.4
15	93462	-57.6	-56.0	-54.6	-53.3	-51.3	-49.5	-47.5	-45.8	-43.9	-41.4
10	102313	-54.6	-52.7	-50.8	-48.8	-47.3	-45.5	-43.0	-41.4	-39.8	-36.3

Table 122. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: Winter

NO. OBSERVATIONS -- SURFACE = 1161, TOP = 318

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT.)	THE WINDWARD CUMULATIVE FREQUENCY DISTRIBUTION									
		1.0 -250	2.0 -250	5.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN	75.0 -150	80.0 -150	90.0 -150
SFC	1.3	.5	2.1	3.8	5.6	6.9	8.5	11.7	14.9	16.5	17.8
1000	51.8	3.6	4.9	6.3	7.7	8.8	10.1	12.7	15.3	16.6	17.7
1929	19.9	2.4	4.1	5.8	7.1	8.7	11.0	14.9	16.5	17.8	19.1
950	34.9	-2.1	-0.4	1.4	3.3	4.7	6.4	9.8	13.2	14.9	16.3
900	49.7	-4.6	-2.9	-1.0	.8	2.3	4.0	7.5	11.0	12.7	14.2
850	65.8	-7.0	-5.3	-3.4	-1.6	-0.1	1.6	5.1	8.6	10.3	11.8
800	83.1	-9.0	-7.4	-5.6	-3.8	-2.4	-0.4	2.4	5.9	7.6	9.0
750	101.2	-11.6	-10.0	-8.3	-6.5	-5.2	-0.4	2.4	4.4	5.7	7.5
700	120.4	-13.1	-11.4	-9.8	-8.5	-7.9	-3.9	-0.6	7	2.0	3.6
650	141.1	-18.1	-16.6	-15.0	-13.4	-12.2	-10.7	-7.8	-4.9	-3.4	-2.2
600	163.2	-22.3	-20.9	-19.4	-17.8	-16.6	-15.2	-12.3	-9.4	-8.0	-6.8
550	186.1	-26.0	-25.5	-24.0	-22.5	-21.4	-20.0	-17.6	-14.6	-13.2	-12.1
500	212.6	-32.4	-31.0	-29.5	-28.0	-26.9	-25.5	-22.8	-20.1	-18.7	-17.6
450	240.5	-38.3	-37.0	-35.6	-34.1	-33.0	-31.7	-29.0	-26.3	-25.0	-23.9
400	271.4	-44.9	-43.7	-42.4	-41.0	-40.0	-38.9	-36.6	-33.8	-32.6	-31.6
350	305.4	-52.2	-51.1	-49.7	-48.7	-47.7	-46.6	-44.3	-42.0	-40.9	-39.9
300	345.2	-61.2	-60.0	-58.7	-57.3	-56.1	-55.1	-52.6	-50.1	-48.9	-47.9
250	391.7	-70.1	-68.4	-66.5	-64.7	-63.2	-61.5	-58.0	-54.5	-52.8	-51.3
200	449.6	-70.7	-69.0	-67.1	-65.3	-63.8	-62.1	-58.6	-55.1	-53.4	-51.9
175	491.6	-70.4	-68.9	-67.2	-65.6	-64.3	-62.8	-59.7	-56.6	-55.1	-53.8
150	540.8	-72.2	-70.7	-69.1	-67.5	-66.3	-64.8	-61.9	-59.0	-57.2	-56.2
125	4861.9	-74.8	-73.1	-71.7	-70.1	-68.8	-67.3	-64.3	-61.3	-59.8	-58.5
100	533.7	-76.4	-74.6	-73.2	-71.7	-70.1	-68.9	-67.5	-64.6	-62.3	-60.3
80	577.8	-72.5	-70.5	-69.2	-67.6	-66.6	-65.6	-63.9	-61.4	-60.2	-59.2
70	604.6	-70.3	-68.0	-66.7	-65.0	-63.8	-62.1	-60.6	-58.4	-57.2	-56.0
60	635.0	-70.1	-68.7	-67.4	-66.0	-64.8	-63.1	-61.6	-59.3	-57.2	-55.9
50	672.7	-68.2	-67.2	-66.2	-65.1	-64.3	-63.3	-61.4	-59.5	-57.7	-55.6
40	716.1	-67.7	-66.7	-65.7	-64.6	-63.6	-62.6	-60.8	-58.9	-56.9	-54.9
30	777.5	-63.9	-62.8	-61.7	-60.6	-59.6	-58.6	-56.8	-54.8	-53.0	-51.9
25	815.12	-62.5	-61.5	-60.4	-59.3	-58.4	-57.4	-55.3	-53.2	-52.2	-51.3
20	862.17	-61.9	-60.7	-59.4	-58.1	-57.1	-55.9	-53.5	-51.1	-49.9	-48.9
15	922.0	-60.5	-59.2	-57.9	-56.4	-55.3	-54.0	-51.4	-48.8	-47.5	-46.4
10	1009.2	-58.4	-56.0	-55.2	-53.5	-52.2	-50.6	-47.6	-44.4	-42.8	-41.5

Table 123. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: Spring
NO. OBSERVATIONS = SURFACE = 1222. TOP = 332

PRESSURE LEVEL (INAS)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)									
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
SFC	13	5.1	6.4	7.8	9.1	10.2	11.5	12.6	13.4	14.0	14.5
1000	453	5.7	6.8	8.0	9.2	10.1	11.2	12.5	13.4	14.0	14.9
950	1873	1.3	2.9	4.6	6.4	7.7	9.3	12.5	15.6	17.4	18.8
900	3376	-1.5	-1.3	2.3	4.3	5.9	7.7	11.5	15.3	17.3	18.6
850	4918	-3.6	-1.7	4.4	2.5	4.1	6.0	9.9	13.8	15.7	18.7
800	6562	-5.5	-3.7	-1.7	3.4	1.9	3.7	7.5	11.3	13.1	16.7
750	8311	-7.6	-5.9	-4.0	-2.1	-0.6	1.1	4.7	8.3	10.0	11.5
700	10128	-10.4	-8.7	-6.9	-5.0	-3.6	-1.9	1.5	4.9	6.6	8.0
650	12073	-13.5	-11.9	-10.1	-8.4	-7.0	-5.4	-2.1	1.2	2.4	4.2
600	14140	-17.2	-15.6	-13.3	-12.1	-10.8	-9.2	-7.6	-6.0	-2.8	-1.2
550	16355	-21.2	-19.7	-18.0	-16.4	-15.1	-13.6	-12.6	-10.5	-7.4	-5.9
500	18737	-24.6	-22.0	-21.4	-20.1	-18.6	-16.6	-15.6	-14.6	-12.6	-11.1
450	21319	-31.3	-29.9	-28.4	-26.6	-25.6	-24.2	-23.2	-21.3	-19.8	-18.2
400	2127	-37.4	-36.0	-34.5	-33.0	-31.9	-30.5	-29.5	-27.8	-25.1	-23.7
350	27208	-44.4	-43.1	-41.7	-40.3	-39.2	-37.9	-36.3	-34.7	-31.4	-28.9
300	30669	-51.5	-50.3	-49.0	-47.8	-46.8	-45.6	-43.3	-41.0	-39.8	-37.6
250	34623	-59.8	-58.6	-57.3	-56.1	-55.1	-53.9	-51.6	-49.3	-46.1	-43.7
200	39235	-69.2	-67.6	-65.8	-64.1	-62.7	-61.1	-57.8	-54.5	-52.9	-51.5
175	42037	-70.3	-68.6	-66.8	-64.9	-63.5	-61.8	-58.4	-55.0	-52.3	-51.9
150	45210	-68.5	-67.1	-65.8	-64.1	-62.9	-61.5	-58.7	-55.9	-53.3	-50.9
125	48953	-67.8	-66.7	-65.5	-64.3	-63.3	-62.2	-59.9	-57.6	-55.5	-52.0
100	53511	-69.2	-68.1	-66.9	-65.7	-64.7	-63.6	-61.3	-59.0	-57.9	-54.5
80	58035	-68.7	-67.6	-66.4	-65.3	-64.4	-63.3	-61.2	-59.1	-58.0	-54.8
70	60745	-67.2	-66.2	-65.2	-64.1	-63.3	-62.3	-60.4	-58.5	-57.5	-55.6
60	63909	-66.0	-65.0	-64.0	-62.9	-62.1	-61.1	-59.2	-57.3	-56.3	-54.4
50	67664	-64.6	-63.6	-62.5	-61.4	-60.5	-59.5	-57.4	-55.3	-53.3	-50.2
40	72333	-62.6	-61.5	-60.3	-59.1	-58.2	-57.1	-54.9	-52.7	-50.7	-49.5
30	78350	-59.8	-58.7	-57.5	-56.3	-55.3	-54.2	-51.9	-49.6	-47.5	-45.1
25	82278	-58.0	-56.9	-55.7	-54.5	-53.6	-52.5	-50.3	-48.1	-46.1	-43.7
20	87021	-56.2	-55.1	-53.7	-52.3	-51.3	-50.1	-47.6	-45.1	-43.9	-41.5
15	93246	-53.7	-52.4	-51.0	-49.5	-48.4	-47.1	-44.4	-41.7	-40.4	-37.8
10	102277	-48.7	-47.4	-46.0	-44.5	-43.4	-42.1	-39.4	-36.7	-34.3	-31.4

Table 12a. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: Summer

NO. OBSERVATIONS -- SURFACE = 1152, TOP = 379

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT)	CUMULATIVE (PERCENTS CELSIUS)									
		-1.0 -2.0	2.28 5.0	10.0 -2.0	15.87 -1.0	25.0 -1.0	50.0 MEAN	75.0 MEAN	86.13 -1.0	90.0 -1.0	95.0 -1.0
SFC	13	10.6	11.6	12.6	13.7	14.5	17.4	19.3	20.3	21.1	22.2
1000	304	10.5	11.3	12.2	13.1	14.6	16.3	18.8	19.5	20.4	21.3
950	1841	6.9	8.5	10.2	12.0	13.3	14.9	18.1	21.3	24.2	22.1
900	3356	9.1	9.8	11.7	13.6	15.1	16.8	20.4	24.0	24.2	29.3
850	4974	8.9	10.5	12.2	13.9	15.2	16.8	19.9	23.0	25.7	32.7
800	6677	8.4	9.7	11.1	12.5	13.6	14.9	17.5	20.1	21.4	29.3
750	8474	5.9	7.1	8.4	9.6	10.6	11.8	14.1	16.4	17.6	20.9
700	10367	3.2	4.2	5.3	6.4	7.3	8.3	10.4	12.5	13.5	16.6
650	12310	-0.2	0.7	1.7	2.7	3.5	4.4	6.3	8.2	9.1	11.9
600	14511	-4.5	-3.6	-2.6	-1.6	-0.8	0.1	2.0	3.9	4.9	6.6
550	16731	-8.9	-8.0	-7.0	-6.1	-5.3	-4.4	-2.6	-0.6	-0.1	7.6
500	19249	-14.0	-13.1	-12.1	-11.2	-10.4	-9.5	-7.7	-5.9	-5.0	-4.2
450	21916	-19.9	-19.0	-18.0	-17.0	-16.2	-15.3	-13.4	-11.5	-10.6	-9.8
400	24816	-26.2	-25.3	-24.3	-23.3	-22.5	-21.6	-20.7	-19.7	-18.9	-17.8
350	28012	-34.1	-33.1	-32.0	-30.9	-30.1	-29.1	-27.1	-25.1	-24.1	-23.1
300	31548	-42.5	-41.5	-40.4	-39.3	-38.5	-37.5	-35.5	-33.5	-32.5	-31.7
250	35666	-51.6	-50.6	-49.5	-48.4	-47.6	-46.6	-44.6	-42.6	-41.6	-40.8
200	40463	-60.1	-59.2	-58.3	-57.3	-56.6	-55.7	-54.0	-52.3	-51.4	-49.7
175	41245	-64.7	-63.8	-62.9	-61.9	-61.2	-60.3	-58.6	-56.9	-56.0	-54.3
150	46394	-70.1	-69.1	-68.0	-66.9	-66.0	-65.0	-62.9	-60.8	-59.9	-57.8
125	50039	-74.6	-73.4	-72.1	-70.7	-69.7	-68.5	-66.5	-64.5	-62.3	-59.9
100	54449	-74.5	-73.3	-72.0	-70.8	-69.6	-68.6	-66.3	-64.0	-62.8	-59.3
80	58910	-69.8	-68.4	-67.8	-66.7	-65.9	-64.9	-63.0	-61.1	-60.1	-58.2
70	61611	-66.3	-65.5	-64.6	-63.8	-63.1	-62.3	-60.7	-59.1	-58.3	-56.8
60	64803	-63.3	-62.6	-61.8	-61.0	-60.4	-59.7	-58.2	-56.7	-56.0	-54.3
50	68510	-60.4	-59.7	-58.9	-58.2	-57.6	-56.9	-55.5	-54.1	-53.4	-50.6
40	72278	-57.6	-56.9	-56.2	-55.5	-54.9	-54.2	-52.9	-51.6	-50.3	-48.2
30	79396	-55.0	-54.0	-53.4	-52.5	-51.9	-51.1	-49.6	-48.1	-46.7	-44.2
25	83291	-52.8	-52.1	-51.3	-50.6	-50.0	-49.3	-47.9	-46.5	-45.2	-43.0
20	88143	-50.9	-50.1	-49.2	-48.4	-47.7	-46.9	-45.3	-43.7	-42.9	-40.5
15	94455	-48.0	-47.2	-46.3	-45.5	-44.8	-44.0	-42.4	-40.6	-39.3	-37.6
10	103517	-44.1	-43.2	-42.2	-41.2	-40.4	-39.5	-37.6	-35.7	-34.8	-32.0

Table 125. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: Autumn
NO. OBSERVATIONS -- SURFACE = 1082, TOP = 3H9

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)										MEAN	+1SD	-1SD
		1.0 -2SD	2.0 -1SD	5.0 0.0	10.0 +1SD	15.0 +2SD	20.0 -1SD	25.0 0.0	30.0 +1SD	35.0 +2SD	40.0 -1SD			
SFC	13	6.4	7.0	9.5	11.1	12.3	13.8	16.7	19.6	21.1	22.3	23.9	25.5	27.0
1000	423	8.1	9.4	10.8	12.1	13.5	14.5	17.0	19.5	20.8	21.9	23.2	24.6	25.9
950	1870	5.2	7.1	8.9	10.9	12.4	14.2	17.8	21.4	23.2	24.7	26.7	28.6	30.4
900	3383	4.1	6.0	8.1	10.2	11.4	13.7	17.6	21.5	23.4	25.0	27.1	29.2	31.1
850	4977	2.7	4.5	6.5	8.5	10.1	11.9	15.7	19.5	21.3	22.9	24.9	26.9	28.7
800	6654	0.5	2.2	4.1	6.9	9.4	12.4	16.1	17.6	19.3	21.1	23.0	24.7	26.4
750	8425	-0.6	-1.7	-1.7	-3.5	-4.4	-6.4	-9.6	-12.6	-14.4	-15.7	-17.5	-19.2	-20.4
700	10295	-4.5	-3.0	-1.3	-1.3	-1.3	-1.6	-3.1	-6.2	-9.3	-10.8	-12.1	-13.7	-15.4
650	12267	-7.7	-6.2	-4.6	-2.0	-2.0	-1.4	-0.3	-2.4	-5.5	-7.0	-8.2	-9.8	-11.4
600	14377	-11.5	-10.1	-8.6	-7.0	-7.0	-5.4	-4.4	-1.5	-1.4	-2.8	-4.0	-5.6	-7.1
550	16627	-15.8	-15.8	-14.4	-12.9	-11.4	-10.2	-8.8	-6.0	-3.2	-1.8	-0.6	-0.6	-8.5
500	19052	-20.7	-19.3	-17.8	-16.3	-15.2	-13.8	-11.1	-8.4	-6.0	-3.0	-1.8	-0.6	-3.8
450	21683	-26.0	-24.7	-23.3	-22.9	-22.9	-20.4	-19.5	-16.9	-14.3	-13.0	-11.9	-10.5	-9.1
400	24544	-32.2	-30.9	-29.5	-28.2	-27.1	-25.1	-23.3	-20.8	-19.5	-18.4	-17.1	-15.7	-14.4
350	27684	-39.2	-38.0	-36.4	-35.4	-34.4	-33.2	-30.8	-28.4	-27.2	-26.2	-24.9	-22.6	-22.4
300	31214	-46.9	-45.8	-44.6	-43.4	-42.4	-41.3	-39.0	-36.7	-35.6	-34.6	-33.4	-32.2	-31.1
250	35240	-55.7	-54.5	-53.2	-51.9	-50.9	-49.7	-47.1	-44.9	-43.7	-42.7	-41.4	-40.1	-38.9
200	39997	-64.5	-63.2	-61.8	-60.4	-59.3	-58.0	-55.4	-52.8	-51.5	-50.4	-49.0	-47.6	-46.3
175	42772	-67.6	-65.1	-63.7	-62.7	-61.5	-60.1	-58.1	-56.5	-55.3	-54.3	-52.9	-51.0	-50.4
150	45915	-70.2	-69.1	-67.9	-66.7	-65.7	-64.6	-62.7	-60.0	-58.0	-56.7	-55.6	-54.4	-53.4
125	49543	-73.6	-72.4	-71.1	-69.9	-68.9	-67.7	-65.4	-63.1	-61.9	-60.9	-59.7	-58.4	-57.2
100	54009	-75.1	-73.9	-72.6	-71.4	-70.4	-69.2	-66.9	-64.6	-63.4	-62.4	-61.2	-59.9	-58.7
80	58442	-72.9	-71.8	-70.6	-69.5	-68.5	-67.5	-65.4	-63.3	-62.2	-61.3	-60.2	-59.0	-57.9
70	61115	-70.6	-69.4	-68.5	-67.4	-66.6	-65.6	-63.4	-61.6	-60.6	-59.8	-58.7	-57.6	-56.6
60	64232	-68.2	-67.2	-66.2	-65.1	-64.3	-63.3	-61.5	-59.5	-58.5	-57.7	-56.6	-55.6	-54.6
50	67949	-65.7	-64.8	-63.8	-62.8	-62.0	-61.1	-59.2	-57.3	-56.4	-55.6	-54.6	-53.6	-52.7
40	72569	-63.5	-62.5	-61.4	-60.3	-59.5	-58.5	-56.5	-54.5	-53.5	-52.7	-51.7	-50.5	-49.5
30	78543	-61.0	-59.9	-58.7	-57.5	-56.6	-55.5	-53.7	-51.1	-50.0	-49.1	-47.9	-46.7	-45.6
25	82421	-59.9	-58.7	-57.4	-56.2	-55.2	-54.2	-51.7	-49.4	-48.2	-47.2	-46.0	-44.7	-43.5
20	87128	-58.6	-57.3	-55.9	-54.6	-53.5	-52.5	-50.7	-47.2	-45.9	-44.8	-43.5	-42.1	-40.8
15	93396	-56.3	-55.1	-53.6	-52.3	-51.2	-49.9	-47.4	-44.9	-43.6	-42.5	-41.2	-39.8	-38.5
10	102228	-53.0	-51.7	-50.3	-48.8	-47.7	-46.4	-43.7	-41.0	-39.7	-38.6	-37.1	-35.7	-34.4

Table 126. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California January

A.O. OBSERVATIONS -- SURFACE = 783, TOP = 102

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)									
		1.0	2.0	5.0	10.0	15.0	20.0	25.0	30.0	40.0	50.0
SFC	13	-0.3	1.0	3.1	6.0	6.2	7.0	11.1	14.4	16.0	17.4
1000	511	2.6	3.8	5.3	6.0	6.0	6.4	12.7	15.0	16.4	17.6
950	1942	-0.6	1.1	2.9	4.7	6.1	7.7	11.1	14.4	16.1	17.5
900	3412	-3.5	-1.7	-2.7	2.2	3.7	5.5	9.1	12.7	14.5	16.0
850	6941	-5.4	-4.0	-2.1	-0.1	1.4	3.2	6.8	10.4	12.7	13.7
800	6545	-7.9	-6.2	-4.3	-2.4	-0.9	0.8	4.4	8.0	10.4	12.2
750	6310	-9.3	-8.2	-6.4	-4.5	-3.1	-1.4	2.0	5.4	7.1	8.5
700	10114	-12.4	-10.0	-9.0	-7.3	-5.9	-4.3	-1.0	2.3	7.1	10.4
650	12047	-15.4	-13.9	-12.1	-10.6	-9.1	-7.5	-4.4	-1.3	5.3	7.0
600	14111	-19.0	-17.5	-15.8	-14.2	-12.9	-11.4	-8.3	-5.2	-3.7	-0.6
550	16304	-23.1	-21.6	-20.0	-18.4	-17.2	-15.7	-12.6	-9.9	-8.4	-7.2
500	18674	-28.5	-26.4	-24.9	-23.3	-22.1	-20.6	-17.7	-14.8	-13.3	-12.3
450	21274	-33.7	-32.2	-30.6	-29.0	-27.4	-26.1	-23.4	-20.5	-19.0	-17.8
400	24019	-39.4	-36.5	-35.0	-33.5	-32.4	-30.4	-29.4	-26.8	-25.4	-24.2
350	27114	-45.2	-44.5	-43.1	-41.8	-40.7	-39.4	-39.4	-36.4	-33.1	-32.0
300	30554	-52.6	-51.5	-50.3	-49.1	-48.2	-47.1	-44.9	-42.7	-41.6	-40.7
250	34472	-61.7	-60.5	-59.2	-57.9	-56.9	-55.7	-53.3	-50.9	-49.7	-48.5
200	39111	-71.0	-69.2	-67.3	-65.3	-63.4	-62.0	-58.4	-55.0	-53.0	-51.5
175	41870	-70.3	-69.2	-67.7	-65.4	-63.9	-62.2	-58.4	-55.0	-53.3	-51.8
150	45016	-69.4	-68.1	-66.9	-64.9	-63.4	-62.1	-59.1	-56.1	-54.6	-53.3
125	48773	-71.5	-69.6	-68.1	-66.6	-65.4	-64.0	-61.2	-58.4	-56.3	-55.3
100	53224	-74.5	-72.5	-70.9	-69.3	-68.1	-66.4	-63.7	-60.8	-59.3	-58.1
80	57742	-73.3	-72.0	-70.6	-69.1	-68.0	-66.7	-64.0	-61.3	-60.0	-58.9
70	62443	-71.4	-70.2	-68.9	-67.7	-66.7	-65.5	-63.2	-60.9	-59.7	-58.7
60	67540	-68.9	-67.0	-66.4	-65.7	-64.4	-63.8	-61.7	-59.6	-57.7	-56.6
50	67270	-66.7	-65.4	-64.4	-63.4	-62.1	-60.2	-58.3	-56.4	-54.6	-53.7
40	71837	-64.8	-63.9	-63.0	-62.0	-61.3	-60.4	-58.7	-57.0	-56.1	-55.3
30	77776	-63.0	-62.1	-61.1	-60.1	-59.3	-58.4	-56.5	-54.6	-53.7	-52.9
25	81572	-62.3	-61.1	-60.2	-59.2	-58.2	-57.2	-55.1	-53.0	-52.0	-51.1
20	86240	-61.1	-60.1	-59.1	-58.1	-57.7	-56.8	-54.7	-52.5	-50.4	-49.5
15	92352	-60.0	-59.0	-57.5	-56.1	-55.1	-53.9	-51.9	-49.9	-48.4	-47.2
10	101093	-59.2	-58.6	-56.4	-54.9	-53.2	-51.4	-49.3	-47.7	-46.7	-45.3

Table 127. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: February
NO. OBSERVATIONS -- SURFACE = 131. TOP = 74

PRESSURE LEVEL (INHS)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)									
		2.0 2.2	4.0 4.2	10.0 10.2	15.8° 15.0	25.0 -15.0	50.0 -50.0	65.0 -65.0	80.0 -80.0	90.0 -90.0	95.0 -95.0
SFC	1.3	2.0	4.5	6.1	7.4	9.9	11.9	14.4	17.7	19.3	20.9
1000	541	4.6	5.9	7.1	8.3	9.3	10.5	12.8	15.1	16.3	18.5
750	1939	1.6	3.1	4.7	6.3	7.5	9.0	11.9	14.8	16.3	19.8
900	3422	-1.0	-6.6	2.3	4.0	5.3	6.9	10.6	13.1	14.7	17.5
850	4910	-1.3	-1.7	-0.7	1.7	3.0	4.6	7.7	10.8	12.4	16.0
800	6601	-5.6	-4.0	-2.3	-0.7	1.6	2.1	5.2	8.3	11.1	15.4
750	8371	-7.4	-6.0	-4.5	-2.9	-1.7	-0.3	2.6	5.5	6.9	11.1
700	10141	-9.0	-8.4	-7.2	-5.7	-4.6	-3.3	-0.6	2.1	3.4	4.5
650	12070	-12.9	-11.6	-10.3	-8.9	-7.9	-6.7	-4.2	-1.7	-0.5	-0.5
600	14127	-16.2	-15.1	-13.9	-12.7	-11.7	-10.4	-8.3	-6.0	-4.9	-3.9
550	16322	-20.5	-19.4	-18.2	-17.0	-16.1	-15.0	-12.8	-10.6	-9.5	-8.6
500	18674	-25.3	-24.7	-23.0	-21.9	-21.0	-19.9	-17.8	-15.7	-14.6	-13.7
450	21250	-31.2	-31.2	-28.9	-27.7	-26.7	-25.6	-23.7	-21.0	-19.9	-18.9
400	24019	-37.5	-36.5	-35.3	-34.1	-32.1	-30.0	-29.7	-27.4	-26.3	-25.3
350	27116	-45.0	-43.9	-42.7	-41.5	-40.5	-39.4	-37.1	-34.8	-33.7	-32.7
300	30554	-52.4	-51.7	-50.5	-49.3	-48.4	-47.3	-45.1	-42.9	-41.8	-40.9
250	34452	-61.9	-60.7	-59.4	-58.1	-57.1	-55.9	-53.5	-51.1	-49.9	-48.9
200	39111	-70.4	-68.6	-66.7	-65.7	-63.2	-61.4	-57.8	-54.2	-52.4	-50.9
175	41877	-88.4	-87.2	-85.4	-83.7	-82.3	-80.7	-77.4	-74.1	-72.5	-70.9
150	45046	-67.8	-66.5	-65.1	-63.6	-62.5	-61.2	-58.5	-55.8	-53.4	-51.9
125	48743	-69.4	-68.2	-66.9	-65.5	-64.5	-63.3	-60.8	-58.3	-57.1	-56.1
100	53304	-72.8	-71.5	-70.1	-69.6	-67.5	-66.2	-63.5	-60.8	-59.5	-58.4
80	57795	-73.3	-72.0	-70.6	-69.2	-68.1	-66.8	-64.2	-61.6	-60.3	-59.2
70	60446	-71.2	-70.1	-68.9	-67.8	-66.9	-65.7	-63.7	-61.6	-60.5	-59.6
60	63553	-69.6	-68.6	-67.6	-66.5	-65.7	-64.7	-62.8	-60.9	-59.9	-59.1
50	67251	-67.4	-66.7	-65.7	-64.7	-63.7	-62.9	-61.0	-59.2	-58.3	-57.5
40	71847	-65.4	-64.9	-63.8	-62.7	-61.9	-60.9	-59.0	-57.1	-56.1	-55.3
30	77772	-62.7	-61.4	-60.8	-59.9	-59.1	-58.2	-56.4	-53.7	-52.9	-52.0
25	81678	-60.4	-59.5	-58.6	-57.6	-56.9	-55.0	-54.3	-52.6	-51.7	-51.0
20	86319	-58.2	-57.1	-56.0	-55.1	-54.1	-52.0	-50.0	-48.1	-47.2	-46.3
15	92434	-57.0	-55.9	-54.7	-53.6	-52.7	-51.6	-49.5	-47.4	-46.3	-45.4
10	101146	-53.4	-52.1	-50.6	-49.4	-48.0	-47.0	-45.2	-42.4	-41.0	-39.8

Table 128 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: March
NO. OBSERVATIONS -- SURFACE = 191. TOP = 97

PRESSURE LEVEL (MASL)	MEAN HEIGHT (ft.)	CUMULATIVE FREQUENCY (%)										MEAN	MEAN
		1.0	2.28	5.0	10.0	15.87	25.0	34.0	50.0	75.0	90.0		
500	1.0	3.7	5.0	6.4	7.8	8.9	10.2	12.6	15.4	16.7	19.2	20.6	21.9
500	4.92	5.6	6.6	7.7	8.8	9.6	10.6	12.6	14.6	15.6	16.4	16.6	16.6
500	10.3	2.8	4.4	6.0	7.2	8.7	11.4	14.5	16.0	17.2	18.8	20.6	21.9
500	33.13	-1.0	0.1	1.6	3.4	4.4	6.4	9.4	13.2	14.4	16.2	19.8	21.4
500	49.25	-3.5	-1.4	-0.2	-1.6	-2.4	-4.5	-7.7	-10.9	-12.5	-13.8	-15.6	-16.4
500	65.55	-5.7	-4.2	-2.5	-0.9	-1.4	-1.9	-2.1	-0.6	-2.1	-5.2	-6.7	-12.5
500	82.14	-8.1	-6.5	-4.9	-3.3	-2.1	-3.7	-3.7	-0.9	-2.1	-3.5	-6.3	-9.7
500	100.9	-10.4	-9.0	-7.9	-6.3	-5.1	-7.0	-7.0	-1.6	-2.2	-4.7	-7.8	-11.1
500	120.0	-14.2	-12.8	-11.3	-9.8	-8.4	-7.7	-7.7	-4.4	-6.2	-1.0	-2.5	-5.4
500	140.0	-17.4	-16.4	-14.9	-13.4	-12.3	-10.9	-10.9	-6.2	-7.5	-4.0	-5.0	-1.0
500	162.6	-21.4	-19.1	-17.7	-16.4	-15.3	-12.7	-12.7	-8.4	-10.1	-7.7	-9.9	-3.6
500	186.9	-25.4	-24.2	-22.8	-21.7	-20.4	-17.4	-17.4	-13.9	-15.2	-12.8	-16.0	-8.7
500	211.1	-32.1	-30.9	-29.6	-28.2	-27.2	-26.0	-26.0	-23.5	-21.0	-19.8	-17.4	-14.9
500	239.1	-38.2	-37.0	-35.7	-34.5	-33.5	-32.3	-32.3	-30.0	-27.7	-26.5	-25.5	-23.0
500	270.1	-45.4	-43.0	-41.8	-40.4	-39.4	-36.7	-36.7	-35.1	-35.1	-34.0	-33.0	-29.5
300	304.7	-52.6	-51.4	-50.2	-49.1	-48.2	-47.1	-47.1	-45.0	-42.9	-41.8	-40.9	-36.6
300	343.1	-60.4	-59.1	-58.1	-57.0	-56.1	-55.0	-55.0	-52.9	-50.8	-49.7	-48.8	-46.5
300	390.4	-70.4	-68.4	-66.6	-64.6	-61.1	-61.3	-61.3	-58.4	-52.1	-50.6	-48.6	-44.6
300	418.9	-69.2	-68.2	-66.3	-64.4	-62.9	-61.2	-61.2	-57.4	-52.3	-50.8	-48.9	-45.3
300	449.7	-67.1	-65.8	-64.4	-61.1	-62.0	-60.7	-60.7	-55.7	-54.4	-53.3	-52.0	-49.3
300	481.0	-67.2	-66.2	-65.1	-64.0	-63.1	-62.1	-62.1	-60.0	-57.9	-56.0	-54.9	-52.4
300	532.1	-69.4	-68.0	-67.1	-66.0	-65.1	-64.0	-64.0	-61.9	-59.8	-58.0	-56.9	-54.4
300	576.5	-68.4	-67.7	-66.7	-65.7	-64.9	-64.0	-64.0	-62.1	-60.2	-59.3	-57.5	-55.6
300	605.5	-67.4	-65.8	-64.8	-64.1	-63.2	-61.4	-61.4	-60.5	-59.8	-58.7	-57.2	-56.3
300	634.6	-66.7	-65.8	-64.8	-63.9	-63.1	-62.2	-62.2	-60.4	-59.6	-58.7	-56.9	-54.1
300	671.4	-65.4	-64.6	-63.6	-62.5	-61.7	-60.7	-60.7	-59.4	-58.6	-57.1	-56.0	-52.0
300	719.5	-64.1	-63.0	-61.8	-60.7	-59.4	-58.7	-58.7	-56.6	-54.5	-53.4	-52.5	-49.1
300	760.2	-61.1	-60.0	-58.8	-57.7	-56.4	-55.7	-55.7	-53.6	-51.5	-50.4	-50.2	-46.1
300	814.4	-59.4	-58.4	-57.2	-56.0	-55.1	-54.0	-54.0	-52.0	-50.2	-49.5	-49.5	-46.1
300	866.4	-58.9	-57.4	-56.0	-54.5	-53.4	-52.0	-52.0	-49.3	-46.6	-45.2	-45.2	-41.1
300	924.5	-56.4	-54.9	-52.9	-51.4	-49.6	-47.6	-47.6	-45.6	-42.6	-40.6	-39.1	-33.4
300	971.5	-53.4	-50.2	-48.1	-46.2	-44.1	-41.5	-41.5	-39.5	-37.9	-35.7	-35.2	-30.9

Table 129. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: April
NO. OBSERVATIONS -- SURFACE = 413. TOP = 112

PRESSURE LEVEL (MASL)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)				MEAN +1SD	MEAN -1SD	90.0	95.0	97.5	99.0
		1.0 -250	2.0 -150	5.0 -100	10.0 -50						
SEC	1.2	5.6	6.0	8.1	9.3	10.3	11.5	12.0	16.1	17.3	19.5
1000	453	6.0	7.0	8.1	9.2	10.1	11.1	13.2	15.3	17.2	19.3
950	1670	-4	2.4	4.2	5.9	7.3	8.9	12.2	15.5	17.1	18.5
100	1350	-2.1	-0.3	1.7	5.3	7.1	10.9	14.7	16.5	18.1	20.1
450	670	-4.0	-2.2	-0.2	1.8	3.4	5.0	12.8	14.6	16.2	18.2
400	654	-6.0	-4.2	-2.3	-0.3	1.7	3.0	6.6	10.7	12.0	13.5
750	627A	-8.2	-6.5	-4.7	-2.8	-1.4	0.3	3.5	7.1	8.8	10.2
700	16112	-10.9	-9.1	-7.5	-5.8	-4.4	-2.8	3.8	5.4	6.8	8.5
650	1204	-14.0	-12.4	-10.7	-9.0	-7.7	-6.1	-3.0	-1.1	1.7	3.0
600	16032	-17.4	-15.9	-14.3	-12.7	-11.4	-9.9	-6.9	-3.9	-2.4	-1.1
550	16312	-21.4	-20.0	-18.5	-16.9	-15.7	-14.3	-10.5	-7.1	-5.9	-4.3
500	18675	-26.1	-24.7	-23.2	-21.7	-20.6	-19.2	-16.5	-13.8	-12.4	-11.3
450	21243	-31.2	-29.9	-28.5	-27.1	-26.0	-24.7	-22.1	-19.5	-18.2	-17.1
400	24062	-37.0	-35.8	-34.5	-33.2	-32.0	-31.0	-28.4	-26.2	-25.0	-24.0
350	27096	-43.3	-42.3	-41.2	-40.1	-39.2	-38.1	-36.1	-34.0	-33.0	-32.0
300	30551	-50.7	-49.7	-48.7	-47.6	-46.8	-45.8	-43.9	-42.0	-41.0	-40.2
250	34635	-60.4	-59.2	-57.9	-56.7	-55.7	-54.5	-52.7	-49.9	-48.7	-47.7
200	39144	-70.6	-69.4	-68.9	-67.9	-67.4	-67.0	-65.6	-58.0	-54.4	-52.6
175	41910	-71.2	-69.4	-67.4	-65.4	-63.6	-62.0	-58.7	-54.4	-52.6	-51.0
150	45019	-68.5	-67.0	-65.4	-63.8	-62.6	-61.1	-58.2	-55.3	-53.8	-52.8
125	48117	-67.0	-65.9	-64.7	-63.5	-62.6	-60.5	-59.3	-57.1	-56.0	-55.1
100	53176	-68.5	-67.4	-66.2	-65.0	-64.0	-62.9	-60.6	-58.3	-57.2	-56.2
80	57956	-68.1	-67.1	-65.8	-64.6	-63.7	-62.6	-60.4	-58.2	-57.1	-56.2
70	60769	-66.6	-65.6	-64.6	-63.5	-62.7	-61.7	-59.6	-57.9	-56.9	-56.1
60	63819	-65.1	-64.4	-63.6	-62.5	-61.7	-60.7	-58.8	-56.9	-55.9	-55.1
50	67615	-63.9	-62.9	-61.9	-60.8	-60.0	-59.0	-57.1	-55.2	-54.2	-53.4
40	72211	-61.5	-60.5	-59.4	-58.3	-57.5	-56.5	-54.5	-52.5	-51.5	-50.7
30	78323	-59.8	-58.6	-57.3	-56.1	-55.1	-53.9	-51.6	-49.3	-48.6	-47.5
25	82149	-57.4	-56.7	-55.5	-54.4	-53.5	-52.4	-50.3	-48.2	-47.1	-46.2
20	86914	-55.4	-54.3	-53.1	-52.1	-51.9	-50.9	-49.8	-47.5	-45.2	-43.1
15	93222	-52.2	-51.1	-49.9	-48.7	-47.8	-46.7	-44.5	-42.3	-41.2	-40.3
10	102175	-47.5	-46.3	-45.0	-43.8	-42.8	-41.6	-39.3	-37.0	-35.8	-33.6

Table 130 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: May

PRESSURE LEVEL (inches)	MEAN HEIGHT (feet)	NO. OBSERVATIONS -- SURFACE = 4160 TDP = 122A										
		1.0	2.0 ^a	5.0	10.0	15.0 ^b	25.0	40.0	50.0	75.0	90.0	95.0
SFC	13	7.0	8.7	9.5	10.8	11.8	13.0	15.4	17.0	19.0	20.0	21.3
1000	610	6.5	7.4	8.8	10.0	11.0	12.1	14.4	16.7	17.8	18.3	20.0
950	1054	2.5	4.1	5.0	7.6	8.9	10.5	13.7	16.0	18.5	19.6	21.6
900	3763	.7	2.5	4.5	6.5	8.1	9.9	13.7	17.5	19.3	20.9	22.9
850	4921	-0.2	1.4	3.3	5.8	7.4	9.2	12.0	14.6	16.6	20.2	22.2
800	6595	-1.6	1.7	2.2	4.9	5.5	7.2	10.7	14.2	15.9	19.2	21.1
750	8343	-3.1	-1.5	-2	1.6	3.2	4.8	7.9	11.0	12.6	13.9	15.6
700	10194	-5.7	-4.2	-2.6	-1.9	-1.7	4.6	6.6	9.0	10.2	11.9	13.4
650	12150	-8.8	-7.4	-5.9	-4.4	-3.2	-1.8	1.6	3.6	5.2	6.4	7.9
600	14249	-12.7	-11.3	-9.8	-8.3	-7.2	-5.8	-3.1	-0.4	1.0	2.1	3.6
550	16490	-16.7	-15.4	-14.0	-12.6	-11.5	-10.2	-7.4	-3.7	-2.6	-1.2	-1.5
500	18991	-21.3	-20.1	-18.6	-17.4	-16.4	-15.2	-12.7	-10.2	-9.0	-6.6	-5.3
450	21514	-26.9	-25.7	-24.4	-23.1	-22.1	-20.9	-18.6	-16.1	-14.9	-13.9	-12.6
400	24755	-33.5	-32.3	-31.0	-29.7	-28.7	-27.5	-25.1	-22.7	-20.5	-19.2	-17.9
350	27470	-40.9	-39.7	-38.4	-37.2	-36.2	-35.0	-32.7	-30.4	-29.2	-28.2	-25.7
300	30948	-49.4	-47.4	-46.2	-45.1	-44.2	-43.1	-41.0	-38.9	-36.9	-35.8	-34.6
250	34954	-57.1	-56.1	-54.9	-53.8	-52.9	-51.9	-49.8	-47.7	-45.8	-44.7	-42.6
200	39642	-66.2	-65.1	-63.7	-62.3	-61.3	-60.1	-57.6	-55.1	-53.9	-51.5	-49.0
175	42344	-69.3	-67.9	-66.4	-64.8	-63.4	-62.2	-59.9	-57.4	-55.0	-52.2	-49.3
150	45518	-69.5	-68.1	-66.6	-65.1	-64.1	-62.6	-59.9	-57.2	-55.8	-53.2	-50.3
125	49245	-69.0	-67.4	-66.5	-65.2	-64.2	-63.0	-60.6	-58.2	-56.0	-54.7	-52.2
100	53749	-70.0	-68.4	-67.5	-66.2	-65.2	-64.0	-61.6	-59.2	-58.0	-57.0	-55.7
80	58323	-68.1	-67.1	-66.2	-65.1	-64.2	-63.2	-61.1	-59.0	-58.0	-57.1	-55.9
70	61640	-65.4	-64.4	-63.7	-62.9	-62.0	-60.5	-58.1	-56.3	-55.2	-54.2	-53.2
60	64226	-65.6	-64.4	-63.4	-62.3	-61.4	-60.5	-58.6	-56.7	-54.9	-53.8	-51.6
50	67912	-63.7	-62.7	-61.6	-60.5	-59.6	-58.6	-56.4	-54.4	-52.5	-50.3	-49.3
40	72614	-61.2	-60.1	-58.9	-57.6	-56.9	-55.8	-53.7	-51.6	-50.5	-49.5	-46.2
30	78644	-57.2	-56.3	-55.3	-54.3	-53.5	-52.6	-50.7	-48.6	-47.9	-46.1	-44.2
25	82549	-55.4	-54.4	-53.5	-52.5	-51.5	-50.6	-48.6	-47.0	-45.3	-43.3	-42.4
20	87411	-53.1	-52.1	-51.0	-49.9	-49.1	-48.1	-46.1	-43.1	-42.3	-41.2	-39.1
15	93771	-48.4	-46.0	-47.1	-46.2	-45.5	-43.7	-41.1	-40.5	-39.8	-38.0	-37.2
10	102746	-42.4	-41.8	-40.9	-40.1	-39.4	-38.6	-37.0	-36.6	-35.9	-33.1	-32.2

Table I-11 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California. June

NO. 24233-A11015 -- 3344815 661 101 119

Table I-12 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California

Table 133. Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: August
 NO. OBSERVATIONS = SURFACE = 423, TDP = 154

PRESSURE LEVEL (INCHES)	MEAN	MEAN +1 SD	MEAN -1 SD	TEMPERATURE (DEGREES CELSIUS)					MEAN	MEAN +1 SD	MEAN -1 SD	MEAN	MEAN +1 SD	MEAN -1 SD
				5.0	10.0	15.0	20.0	25.0						
SFC	1.9	11.3	12.0	13.8	14.8	15.6	16.5	18.4	20.3	21.2	22.0	23.0	24.0	24.9
1000	3.7	12.4	13.3	14.1	14.8	15.4	16.1	17.5	18.9	19.6	20.2	20.9	21.7	22.4
950	4.4	14.4	10.0	11.7	13.4	14.7	16.3	19.4	22.5	24.1	25.4	27.1	28.8	30.4
900	3.6	10.1	11.7	13.5	15.2	16.6	18.2	21.5	24.6	26.4	27.8	29.5	31.3	32.9
850	5.0	11.2	12.6	14.1	15.6	16.7	18.1	20.8	21.5	24.9	26.0	27.5	29.0	30.4
800	6.9	10.5	11.6	12.9	14.0	14.9	16.0	18.2	20.4	21.5	22.4	23.6	24.8	25.9
750	8.7	8.2	9.1	10.1	11.1	11.9	12.8	14.7	16.6	17.5	18.3	19.3	20.3	21.2
700	10.7	5.3	6.1	7.0	7.8	8.5	9.3	10.9	12.5	13.3	14.0	14.8	15.7	16.5
650	12.1	1.7	2.4	3.2	4.0	4.6	5.3	6.8	8.3	9.0	9.6	10.4	11.2	11.9
600	14.6	-2.7	-2.0	-1.2	-0.4	0.2	0.9	3.9	4.6	5.2	6.0	6.8	7.5	7.7
550	16.4	-7.1	-6.4	-5.6	-4.9	-4.3	-3.6	-2.2	-0.8	-0.6	-0.5	-0.2	0.0	2.7
500	19.4	-12.2	-11.5	-10.7	-10.0	-9.4	-8.7	-7.3	-5.9	-5.2	-4.6	-3.9	-3.1	-2.4
450	21.9	-17.4	-16.3	-15.6	-15.0	-14.3	-12.9	-11.5	-10.8	-10.2	-9.5	-8.7	-8.0	-7.6
400	24.2	-24.2	-23.6	-22.7	-21.9	-20.3	-19.1	-17.6	-16.9	-16.3	-15.5	-14.7	-14.0	-13.7
350	28.0	-31.0	-31.1	-30.2	-29.4	-29.7	-27.9	-26.1	-24.7	-23.9	-23.2	-22.4	-21.5	-20.7
300	31.9	-40.6	-39.4	-38.9	-38.0	-37.1	-36.5	-34.8	-32.3	-31.3	-31.6	-30.7	-29.8	-29.0
250	35.1	-50.9	-49.1	-49.2	-47.2	-46.5	-45.6	-43.9	-42.2	-41.3	-40.6	-39.6	-38.7	-37.8
200	40.5	-57.5	-57.0	-56.2	-55.6	-54.9	-53.4	-51.9	-51.2	-50.6	-49.8	-49.0	-48.3	-48.3
175	43.7	-63.4	-62.7	-61.7	-61.1	-60.5	-59.8	-58.3	-56.8	-56.1	-55.7	-53.9	-53.1	-53.1
150	46.2	-68.9	-68.1	-67.2	-66.3	-65.6	-64.8	-63.1	-61.4	-60.6	-59.9	-59.0	-58.1	-57.3
125	50.1	-74.2	-73.1	-71.9	-70.8	-69.9	-68.8	-66.7	-64.6	-63.5	-62.6	-61.5	-60.3	-59.2
100	54.5	-74.7	-73.6	-72.4	-71.2	-70.2	-69.1	-66.8	-64.5	-63.4	-62.4	-61.2	-60.0	-58.9
80	59.0	-70.0	-69.0	-68.0	-66.9	-66.1	-65.1	-63.2	-61.3	-60.3	-59.5	-58.4	-57.6	-56.4
70	61.7	-66.3	-65.6	-64.6	-63.8	-63.1	-62.3	-60.7	-59.1	-58.3	-57.6	-56.8	-55.9	-55.1
60	64.9	-63.1	-62.4	-61.6	-60.8	-60.2	-59.5	-58.0	-56.5	-55.8	-55.2	-54.4	-52.9	-52.9
50	68.0	-60.4	-59.7	-58.9	-58.2	-57.6	-56.9	-55.5	-54.1	-53.4	-52.8	-52.1	-51.3	-50.6
40	73.1	-57.5	-56.8	-56.1	-55.4	-54.6	-53.1	-52.0	-51.5	-50.8	-50.2	-49.5	-48.8	-48.1
30	79.5	-54.1	-53.3	-52.3	-51.4	-50.5	-50.1	-49.7	-48.2	-47.5	-46.9	-46.1	-45.3	-44.6
25	82.6	-52.9	-52.2	-51.4	-50.7	-50.1	-49.4	-48.0	-46.6	-45.9	-45.3	-44.6	-43.8	-43.1
20	85.2	-51.4	-50.6	-49.7	-48.9	-48.2	-47.4	-45.8	-44.2	-43.4	-42.7	-41.9	-41.2	-40.2
15	94.5	-47.6	-46.9	-46.0	-45.3	-44.5	-43.7	-42.8	-41.1	-40.3	-39.6	-38.7	-37.8	-37.0
10	103.7	-44.6	-43.7	-42.8	-41.8	-41.1	-40.2	-38.5	-36.6	-35.9	-35.2	-34.2	-33.3	-32.4

Table 134 Cumulative Frequency Distribution of Upper Air Temperatures at Standard Pressure Levels for Point Mugu, California: September

No. OBSERVATIONS = SURFACE = 138A, TOP = 132

PRESSURE LEVEL (IN-SI)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)						MEAN	90.0	95.0	97.73	99.0
		5.0	10.0	15.0	20.0	25.0	-150					
SFC	13	3.1	10.4	11.8	13.1	14.2	15.5	18.0	20.5	21.8	24.2	25.6
1000	358	10.7	11.7	12.8	13.9	14.7	15.7	17.7	19.7	21.5	23.5	26.7
950	181	6.2	9.8	11.6	13.3	14.7	16.3	19.6	22.9	24.5	26.9	29.4
900	3337	9.5	11.1	12.8	14.6	15.9	17.5	20.7	23.9	25.5	26.8	30.3
850	991	9.5	11.0	12.5	14.0	15.1	16.5	19.2	21.9	23.2	24.4	26.4
800	6647	8.0	9.2	10.5	11.7	12.7	13.9	16.7	18.5	19.7	20.7	21.9
750	8638	5.6	6.6	7.7	8.8	9.6	10.6	12.6	14.6	15.6	17.5	18.6
700	10322	2.4	3.3	4.3	5.3	6.1	7.0	9.9	10.8	11.7	12.5	13.5
650	12333	-1.1	-0.2	-0.8	-1.7	-2.5	-3.4	-5.2	-7.0	-7.9	-8.7	-10.6
600	14444	-5.4	-4.4	-3.5	-2.5	-1.7	-0.8	1.1	3.9	4.7	5.7	6.7
550	16776	-9.2	-8.4	-7.5	-6.6	-5.9	-5.1	-3.4	-1.7	-0.9	-0.2	2.4
500	19113	-12.9	-13.0	-12.2	-11.3	-10.7	-9.9	-8.4	-6.9	-6.1	-5.5	-3.0
450	21821	-18.6	-19.3	-18.6	-17.8	-17.0	-16.4	-15.7	-14.2	-12.7	-12.0	-10.4
400	24718	-25.6	-24.9	-24.1	-23.3	-22.7	-22.0	-20.5	-19.0	-18.3	-17.7	-16.9
350	27834	-33.7	-32.9	-31.2	-30.5	-29.7	-29.1	-28.5	-27.5	-26.5	-24.2	-23.3
300	31460	-42.1	-41.3	-40.4	-39.5	-38.8	-38.0	-36.3	-34.4	-33.8	-32.2	-31.3
250	37511	-51.0	-50.1	-49.1	-48.5	-47.4	-46.3	-44.7	-42.9	-42.0	-41.2	-39.3
200	40331	-60.1	-59.2	-58.2	-57.2	-56.4	-55.5	-53.6	-51.7	-50.8	-49.0	-47.1
175	43117	-64.2	-63.3	-62.3	-61.4	-60.6	-59.6	-57.9	-56.1	-55.2	-53.4	-52.5
150	46224	-69.1	-68.1	-67.1	-66.0	-65.2	-64.2	-62.3	-60.4	-59.4	-57.5	-56.5
125	49921	-73.2	-72.2	-71.1	-70.0	-69.1	-68.1	-66.0	-63.9	-62.9	-60.9	-59.8
100	54346	-74.1	-73.1	-72.0	-70.9	-70.0	-69.0	-66.9	-64.8	-63.8	-61.8	-59.7
80	58940	-70.4	-69.3	-68.9	-68.0	-67.2	-66.3	-64.5	-62.7	-61.8	-60.1	-58.2
70	61663	-68.2	-67.3	-66.4	-65.4	-64.7	-63.8	-62.1	-60.4	-59.5	-57.8	-56.9
60	64610	-65.7	-64.7	-63.9	-62.9	-62.2	-61.3	-59.4	-57.9	-57.0	-56.3	-55.5
50	68373	-62.7	-61.9	-61.1	-60.2	-59.6	-58.8	-57.3	-55.8	-55.0	-53.5	-52.7
40	73022	-59.8	-59.0	-58.1	-57.3	-56.6	-55.8	-54.2	-52.6	-51.8	-50.3	-49.4
30	79018	-56.7	-55.9	-55.0	-54.2	-53.5	-52.7	-51.1	-49.5	-48.7	-47.2	-45.5
25	82912	-54.9	-53.1	-53.2	-52.4	-51.7	-50.9	-49.3	-47.5	-46.9	-45.2	-43.7
20	87812	-53.0	-52.2	-51.3	-50.4	-49.7	-48.9	-47.2	-45.5	-44.7	-43.1	-42.2
15	94634	-49.9	-49.0	-48.0	-47.1	-46.4	-45.7	-44.0	-42.1	-41.4	-40.4	-39.5
10	103022	-47.6	-46.6	-45.6	-44.5	-43.7	-42.7	-40.8	-38.9	-37.9	-36.0	-35.0

Table 135. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for Point Mugu, California: October
NO. OBSERVATIONS -- SURFACE = 19.8. TOP = 142

PRESSURE LEVEL (MB)	MEAN HEIGHT (FT)	TEMPERATURE (DEGREES CELSIUS)			MEAN	75.0	84.13	90.0	95.0	97.73	99.0
		1.0	2.0	5.0							
SFC	13	7.7	9.0	10.4	11.8	12.9	14.2	16.8	19.4	20.7	23.2
1000	430	8.0	9.3	10.7	12.1	13.2	14.5	17.1	19.7	21.0	23.5
950	1877	5.7	7.4	9.3	11.2	12.7	14.4	18.0	21.6	23.3	24.8
900	3386	5.9	7.5	9.4	11.2	12.7	14.4	17.9	21.4	23.1	26.7
850	4987	6.8	8.1	9.9	11.2	12.8	14.0	16.0	19.7	20.8	26.4
800	6663	2.9	4.4	6.0	7.6	8.6	10.3	13.2	16.1	17.6	22.1
750	8415	1.1	1.5	3.0	4.5	5.7	7.1	9.9	12.7	14.1	18.8
700	10249	3.6	2.3	-0.7	2.1	3.6	6.5	9.4	10.9	12.1	16.8
650	12243	-5.7	-4.5	-3.2	-1.8	-0.1	4	2.9	5.4	6.6	13.7
600	14393	-10.2	-8.9	-7.5	-6.2	-5.1	-3.8	-1.3	1.2	2.5	9.0
550	16467	-14.5	-13.3	-12.0	-10.6	-9.6	-8.4	-5.9	-3.4	-2.2	3.6
500	19075	-19.3	-18.1	-16.8	-15.6	-14.5	-13.4	-11.1	-8.8	-7.6	4.9
450	21709	-24.2	-23.2	-22.1	-21.0	-20.1	-19.1	-17.0	-14.9	-13.6	-5.4
400	24570	-30.2	-29.2	-28.2	-27.1	-26.3	-25.3	-23.4	-21.5	-19.7	-11.9
350	27733	-37.5	-36.6	-35.6	-34.6	-33.8	-32.9	-31.0	-29.1	-28.2	-10.8
300	31257	-44.9	-44.0	-43.1	-42.3	-41.6	-40.8	-39.7	-37.6	-36.8	-26.4
250	35279	-53.2	-52.2	-51.2	-51.0	-50.4	-49.5	-47.6	-45.7	-44.0	-35.3
200	40023	-64.3	-63.1	-61.8	-60.4	-59.4	-58.2	-57.7	-53.7	-52.0	-44.0
175	42792	-67.7	-66.5	-65.2	-63.9	-62.9	-61.7	-59.3	-56.9	-54.7	-49.6
150	45935	-70.5	-69.4	-68.2	-67.0	-66.0	-64.9	-62.6	-60.3	-59.2	-49.6
125	49610	-74.2	-72.9	-70.9	-69.7	-68.8	-67.7	-65.5	-63.3	-62.2	-52.6
100	54026	-75.8	-74.6	-73.3	-72.1	-71.1	-69.9	-67.6	-65.3	-63.1	-53.6
80	58442	-73.1	-72.0	-70.9	-69.8	-68.0	-66.0	-64.0	-62.0	-61.1	-42.0
70	61116	-70.3	-69.4	-68.5	-67.5	-66.8	-65.9	-64.7	-62.5	-61.6	-41.1
60	64219	-67.3	-66.5	-65.7	-64.8	-64.2	-63.4	-61.9	-59.6	-58.7	-42.0
50	67943	-64.7	-63.9	-63.1	-62.2	-61.6	-60.8	-59.3	-57.8	-56.4	-39.4
40	72552	-61.8	-61.0	-60.2	-59.3	-58.7	-57.9	-56.4	-55.0	-54.7	-34.4
30	78596	-59.1	-58.2	-57.3	-56.3	-55.6	-54.7	-53.0	-51.3	-50.4	-31.0
25	82464	-57.5	-56.6	-55.6	-54.7	-53.9	-53.0	-51.2	-49.4	-48.5	-29.4
20	87221	-56.5	-55.5	-54.4	-53.3	-52.4	-51.4	-49.3	-47.2	-45.3	-23.1
15	93446	-55.2	-54.1	-52.9	-51.7	-50.7	-49.6	-47.3	-45.0	-43.9	-20.5
10	102221	-50.7	-49.5	-48.3	-47.3	-46.2	-43.9	-41.6	-40.5	-38.3	-16.0

Table 136 Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for Point Mugu, California: November

NO. OBSERVATIONS -- SURFACE = 326, TOP = 114

PRESSURE LEVEL (in S)	DEIN (ft.)	TEMPERATURE (DEGREES CELSIUS)												
		1.0 -250	2.0R -250	5.0 -150	10.0 -100	15.0R -50	25.0 0	50.0 +50	75.0 +150	86.13 +250	90.0 +250	95.0 +250	97.73 +250	99.0 +250
SFC	13	3.6	5.2	7.0	8.8	10.2	11.8	15.2	18.5	20.2	21.6	23.4	25.2	26.8
1000	492	6.1	7.5	9.0	10.6	11.8	13.2	16.1	19.0	20.4	21.6	23.2	24.7	26.7
950	1976	3.5	5.7	7.1	9.0	10.5	12.2	15.4	19.4	21.1	22.6	24.5	26.6	28.1
900	3425	1.3	3.1	5.0	7.0	8.5	10.3	13.9	17.5	20.8	22.8	24.7	26.5	26.5
850	4907	-0.8	-0.5	2.8	4.7	6.2	7.9	11.6	15.1	16.8	18.3	20.2	22.1	23.8
800	6640	-2.4	-1.2	-0.6	2.4	3.4	5.4	8.4	12.2	13.8	15.2	17.0	18.8	20.4
750	9396	-4.9	-3.1	-1.6	-1.1	1.4	3.0	5.1	9.2	10.8	12.1	13.6	15.5	17.1
700	10234	-7.5	-6.0	-4.4	-2.8	-1.5	-0.5	3.0	6.0	7.5	8.8	10.4	12.0	13.5
650	12172	-11.2	-9.7	-8.0	-6.4	-5.1	-3.6	-0.5	2.6	4.1	5.4	7.0	8.7	10.2
600	14272	-14.9	-13.4	-11.8	-10.2	-9.0	-7.5	-4.1	-1.7	-0.2	1.0	2.6	4.2	5.7
550	16436	-19.3	-17.8	-16.2	-14.6	-13.4	-11.9	-9.0	-6.1	-4.6	-3.4	-1.8	-0.2	1.3
500	18844	-23.9	-22.5	-21.0	-19.5	-18.3	-16.9	-14.3	-11.3	-9.9	-8.7	-7.2	-5.7	-4.3
450	21450	-29.4	-28.0	-26.5	-25.0	-23.4	-22.5	-19.6	-17.1	-15.7	-14.6	-13.1	-11.6	-10.2
400	24314	-34.0	-31.6	-32.6	-31.0	-30.1	-28.8	-26.2	-23.6	-22.3	-21.2	-19.8	-18.4	-17.1
350	27375	-41.6	-40.5	-39.3	-38.1	-37.1	-36.0	-33.7	-31.4	-30.3	-29.3	-28.1	-26.9	-25.6
300	30873	-48.7	-47.7	-46.6	-45.5	-44.7	-43.7	-41.7	-39.7	-38.7	-37.9	-36.8	-35.7	-34.7
250	34846	-57.3	-56.2	-55.0	-53.9	-53.0	-52.0	-51.9	-49.8	-47.7	-46.6	-45.7	-44.6	-43.4
200	39547	-67.0	-65.6	-64.1	-62.5	-61.3	-59.9	-57.6	-54.1	-52.7	-51.5	-49.9	-48.4	-47.3
175	42326	-70.1	-68.4	-67.0	-65.4	-64.2	-62.7	-59.8	-55.4	-54.2	-52.6	-51.0	-49.5	-49.5
150	45449	-70.0	-68.0	-67.1	-66.0	-64.7	-62.0	-59.3	-56.0	-54.9	-53.4	-51.0	-49.0	-52.7
125	49147	-73.6	-72.3	-70.9	-69.5	-68.4	-67.1	-64.5	-61.9	-60.6	-59.5	-58.1	-56.7	-55.4
100	53546	-75.1	-73.8	-72.4	-71.1	-70.0	-68.7	-66.2	-63.7	-62.4	-61.3	-60.0	-58.6	-57.3
80	58041	-74.2	-73.0	-71.7	-70.4	-69.4	-68.2	-65.4	-63.4	-62.2	-61.2	-60.0	-58.6	-57.4
70	60749	-71.9	-70.8	-69.9	-68.5	-67.6	-66.5	-64.4	-62.3	-61.2	-60.3	-59.2	-58.0	-56.9
60	63819	-69.1	-68.2	-67.3	-66.3	-65.6	-64.7	-63.0	-61.3	-60.4	-59.7	-58.7	-57.8	-56.9
50	67510	-66.4	-65.7	-64.9	-64.0	-63.4	-62.6	-61.6	-60.1	-57.4	-56.6	-55.9	-55.5	-55.7
40	72077	-64.9	-64.1	-63.2	-62.3	-61.5	-60.6	-59.0	-57.4	-56.6	-55.9	-55.0	-54.1	-53.3
30	75011	-62.9	-61.9	-60.9	-59.8	-59.0	-58.0	-56.1	-54.2	-53.2	-52.4	-51.3	-50.3	-49.3
25	A1814	-61.9	-60.8	-59.7	-59.6	-57.4	-56.8	-54.8	-52.8	-51.8	-51.0	-49.9	-48.8	-47.8
20	A6515	-60.7	-59.6	-58.4	-57.2	-56.2	-55.1	-52.8	-50.5	-49.4	-48.4	-47.2	-46.0	-44.9
15	92621	-57.8	-56.7	-55.5	-54.4	-53.5	-52.4	-50.3	-48.2	-47.1	-46.2	-45.1	-43.9	-42.8
10	101349	-54.6	-53.4	-52.3	-51.1	-50.2	-49.1	-47.6	-45.7	-43.6	-42.7	-41.5	-40.3	-39.2

Table 137. Cumulative Frequency Distribution of Upper-Air Temperatures at Standard Pressure Levels for Point Mugu, California: December
NO. OBSERVATIONS -- SURFACE = 447, TOP = 142

PRESSURE LEVEL (INCHES)	MEAN HEIGHT (FT.)	TEMPERATURE (DEGREES CELSIUS)								
		1,000	2,000	5,000	10,000	15,000	20,000	25,000	30,000	35,000
SFC	13	.8	2.4	5.9	7.3	8.9	12.2	15.5	17.1	18.5
1000	439	4.3	5.6	7.0	6.3	9.4	10.7	13.2	17.0	18.1
950	1913	1.3	2.9	4.6	6.3	7.6	9.2	12.3	15.4	18.3
900	3392	-1.4	-1.7	2.0	3.8	5.7	6.8	10.2	13.6	15.2
850	4944	-4.2	-2.6	-0.6	1.3	2.4	4.5	8.1	11.7	13.4
800	6578	-7.1	-5.3	-3.3	-1.3	-0.2	2.0	5.7	9.4	11.2
750	8327	-8.9	-7.7	-5.3	-2.5	-0.5	-0.3	-3.2	-6.7	-9.4
700	10129	-11.8	-10.1	-8.2	-6.4	-4.9	-3.2	-3.1	-3.8	-5.5
650	12067	-15.1	-13.4	-11.6	-9.7	-8.3	-6.6	-3.7	-1.2	-1.9
600	14124	-18.5	-16.9	-15.1	-13.4	-12.0	-10.4	-7.1	-3.8	-7.0
550	16315	-22.3	-20.8	-19.1	-17.5	-16.2	-14.7	-11.6	-8.5	-10.8
500	18714	-25.1	-23.6	-22.0	-20.8	-19.4	-19.4	-16.5	-13.6	-17.0
450	21206	-29.0	-26.5	-25.0	-23.5	-22.0	-21.0	-19.0	-16.8	-19.9
400	24151	-37.2	-35.9	-34.5	-33.1	-32.0	-30.7	-28.1	-25.5	-29.2
350	27145	-44.0	-42.8	-41.5	-40.1	-39.1	-37.9	-35.4	-32.9	-36.7
300	30646	-49.9	-49.8	-48.6	-47.4	-46.5	-45.1	-43.2	-41.0	-45.9
250	34596	-58.6	-59.8	-57.3	-56.0	-55.0	-53.8	-51.4	-49.0	-47.8
200	39258	-69.4	-67.8	-66.0	-64.2	-62.8	-61.1	-57.8	-54.5	-52.8
175	42024	-71.1	-69.6	-67.7	-65.9	-64.4	-62.7	-59.2	-55.7	-52.5
150	45140	-71.8	-70.2	-68.5	-66.8	-65.5	-63.9	-60.8	-57.7	-54.8
125	48875	-73.8	-72.3	-70.6	-69.0	-67.7	-66.2	-63.1	-60.0	-58.5
100	53353	-76.4	-74.8	-73.1	-71.3	-70.0	-68.4	-65.2	-62.0	-60.4
80	57802	-76.2	-74.6	-72.9	-71.2	-69.9	-68.3	-65.2	-62.1	-60.5
70	60469	-73.7	-72.4	-71.0	-69.5	-68.4	-67.1	-64.4	-61.7	-60.4
60	63546	-71.1	-70.0	-68.8	-67.6	-66.6	-64.7	-63.0	-61.7	-60.9
50	67274	-68.7	-67.7	-66.6	-65.6	-64.5	-63.7	-62.0	-60.8	-59.8
40	71874	-66.3	-65.4	-64.4	-63.4	-62.6	-61.7	-59.8	-57.9	-56.7
30	77720	-64.7	-63.6	-62.4	-61.3	-60.4	-59.3	-57.2	-55.1	-53.0
25	81457	-63.6	-62.5	-61.3	-60.2	-59.3	-58.2	-56.1	-54.0	-52.0
20	86115	-61.0	-60.5	-59.2	-58.1	-56.8	-55.6	-53.5	-51.4	-49.3
15	92174	-62.0	-60.6	-59.1	-57.6	-56.6	-55.1	-52.4	-49.7	-47.7
10	100814	-53.5	-58.0	-56.4	-56.0	-53.5	-52.0	-49.0	-44.6	-41.6

Mean Temperature Time Section

San Nicolas Island mean temperature data from tables 109 to 120 have been used in preparing a time-section of the vertical temperature distribution over the Sea Test Range between the surface and 100,000 feet (figure 33). The summertime inversion is quite apparent from the closed 20°C isotherm near the surface.

The mean freezing level is near 11,000 feet in the winter months, rising to about 15,000 feet in summer. The tropopause is found near 41,000 feet at a temperature of about -58°C in winter and spring and rises to about 51,000 feet and a temperature of -67°C in summer and autumn. (These height determinations are based on the criteria for defining the tropopause height in data from a radiosonde ascent (see reference 8).)

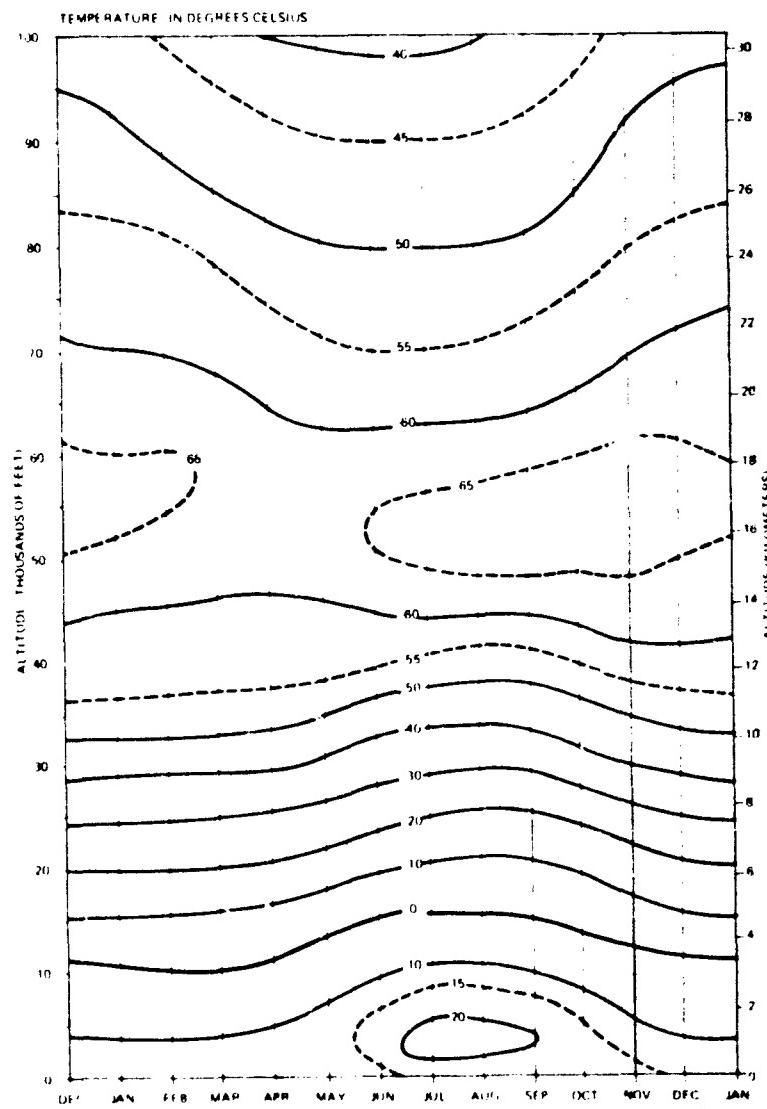


Figure 33. Mean Monthly Upper-Air Temperatures, San Nicolas Island.

Mean Seasonal Temperature Profiles

The January and July temperature data for San Nicolas Island were used in preparing mean profiles (figure 34) for those months to compare with both the U.S. Standard Atmosphere profile, and the January and July temperature profiles of the 30° N Supplemental Atmospheres (references 10 and 11). Note that the mean San Nicolas Island profiles do more closely approximate the Supplemental Atmosphere curves than that of the Standard Atmosphere.

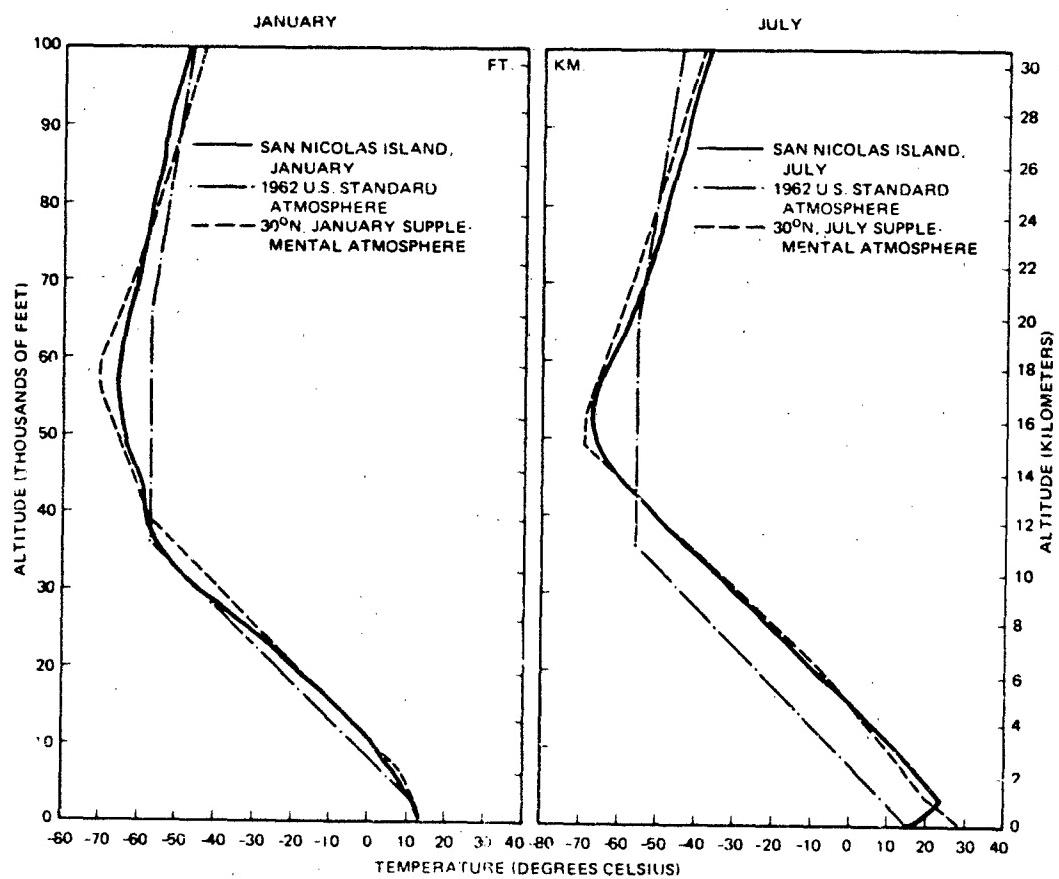


Figure 34. Mean Temperature Profile Comparison, Point Mugu, California.

Upper Air Density

Tables 109 to 120 do not include mean values of density, but density can be computed if one assumes that the mean temperature occurs simultaneously with the pressure value of the standard level, by using the following equation.

$$\rho = 348.38 \left(\frac{P}{T_v} \right)$$

where

ρ = density in grams per cubic meter

P = pressure in millibars

T_v = virtual temperature in Kelvin (K = degrees Celsius +273.15)

Because the density varies with the amount of moisture in the air as well as with temperature and pressure, it is necessary to include a correction for this moisture content. This is done through the use of the virtual temperature, T_v , a figure that is always greater than the temperature, T. The difference between T_v and T increases with increasing relative humidity at a given temperature and pressure, and also increases with increasing temperature and decreasing pressure at a given humidity. Full data concerning this temperature increment may be found in table 72 of the Smithsonian Meteorological Tables (reference 12). A large value of the temperature increment would be, for example, 3.6 Celsius degrees at 25°C (77°F) and 1000-millibar pressure with 100-percent humidity. Through most of the Standard Atmosphere temperature-pressure curve, the increment is less than 1.5°C, and it decreases to zero at temperatures colder than -40°C.

PRESSURE-HEIGHT DATA

Tables 138 through 142 and 143 through 147 list the cumulative frequency distribution of the heights of the standard pressure levels for each season for the entire year for San Nicolas Island and Point Mugu, respectively.

Table 138. Cumulative Frequency Distribution of Standard Pressure Level Heights for San Nicolas Island: Annual

PRESSURE LEVEL (MASL)	1.0 -250	2.0 -250	4.0 -150	10.0 -150	15.0 -150	25.0 -150	50.0 MEAN +150	75.0 +150	94.0 +150	95.0 +150	97.5 +150	99.0 +150
SEC	1631	1663	1695	1734	1762	1794	1860	1926	1949	1946	2022	2155
950	3137	3169	3201	3240	3268	3300	3366	3437	3445	3442	3528	3595
900	4691	4724	4764	4804	4839	4874	4951	5021	5062	5054	5134	5211
850	6304	6344	6367	6445	6483	6527	6617	6698	6752	6740	6838	6911
800	7494	750	750	750	750	750	750	750	750	750	750	750
750	750	750	750	750	750	750	750	750	750	750	750	750
700	700	700	700	700	700	700	700	700	700	700	700	700
650	11671	11749	11810	11912	11975	12050	12201	12453	12453	12453	12573	12654
600	13691	13774	13842	13910	13974	14042	14129	14304	14480	14567	14735	14916
550	14632	14632	14640	14640	14642	14642	14642	14642	14642	14642	14642	14642
500	14162	14274	14397	14520	14615	14728	14957	14957	14957	14957	14957	14957
450	20542	20778	20914	21168	21297	21558	21620	21649	21649	21649	2199	2235
400	23192	23537	23695	23853	23976	24121	24416	24416	24416	24416	24979	25137
350	26401	26565	26743	26922	27100	27224	27556	27888	28051	28170	28468	28747
300	29167	30152	30352	30549	30749	30931	31066	31140	31140	31140	31140	31140
250	33624	33829	34052	34275	34449	34625	34803	35069	35069	35069	35463	36514
200	38231	38451	38642	38933	39121	39342	39799	40138	40138	40138	40449	40888
175	40384	41207	41449	41692	42102	42552	43053	43225	43413	43413	43898	44120
150	44198	44198	44643	44877	45059	45273	45709	46116	46360	46556	46774	46940
125	47984	48186	48403	48620	48789	48980	49393	49798	49997	50196	50383	50600
100	52579	52916	53154	53370	53707	53855	53855	54403	54403	54403	54754	55112
80	57691	57264	57453	57642	57789	5796	58314	58625	58625	58625	58946	59175
70	60171	60944	61036	61036	61072	61067	61001	61145	61145	61145	61145	61145
60	62961	63041	63236	63431	63583	63761	64124	64487	64487	64487	65112	65365
50	66524	66713	66914	67124	67283	67472	67854	68137	68137	68137	68791	69184
40	71024	71230	71434	71677	71450	72055	72470	72855	73041	73264	73877	73915
30	78881	77116	77364	77612	77901	78032	78495	78946	79143	79316	79624	79772
25	80630	80492	81157	81422	81422	81422	81422	81422	81422	81422	81422	81422
20	85567	85531	85920	86104	86104	86104	86104	86104	86104	86104	86445	86734
15	91316	91598	91917	92236	92484	92776	93363	93943	94513	94513	94822	95141
10	99921	100233	100504	100975	101263	101603	102293	102944	103323	103612	103983	104454

Table 139. Cumulative Frequency Distribution of Standard Pressure Level Heights for San Nicolas Island: Winter

NO. OBSERVATIONS = SURFACE = 1942. TOP = 778

PRESSURE LEVEL (MASL)	Mt. Light (ft ft)				MEAN	+1SD	-1SD	95.0	97.1	99.0
	1.0	2.0	5.0	15.0						
5FC	1644	1686	1728	1769	1801	1839	1893	2031	2063	2146
950	3112	3153	3194	3233	3274	3319	3362	3527	3607	3693
850	4641	4695	4715	4746	4783	4823	4961	5098	5137	5232
800	6231	6283	6340	6396	6440	6492	6598	6755	6797	6835
750	7901	7963	8028	8043	8143	8203	8323	8444	8504	8554
700	9694	9754	9826	9848	9954	10020	10154	10258	10410	10482
650	11554	11631	11712	11794	11857	11932	12083	12215	12310	12455
600	13565	13648	13739	13810	13901	13984	14154	14323	14406	14477
550	15693	15791	15881	15961	16070	16162	16344	16535	16627	16705
500	18015	18117	18228	18339	18425	18527	18734	18942	19128	19239
450	20494	20507	20730	20853	20944	21061	21284	21518	21726	21912
400	23231	23356	23491	23626	23730	23854	24104	24555	24941	25118
350	26244	26371	26524	26671	26785	26919	27192	27444	27598	27759
300	29615	29760	29919	30077	30200	30345	30640	30979	31202	31464
250	33694	33845	33983	34111	34245	34577	34889	35061	35173	35299
200	36151	38307	38475	38643	38773	39027	39239	39551	39815	40171
175	40947	41046	41254	41419	41584	41694	41995	42246	42532	42944
150	44170	44311	44465	44619	44738	44874	45164	45450	45591	45710
125	48100	48240	48319	48488	48615	48815	49134	49262	49310	49510
100	52690	52911	52931	53025	53135	53360	53584	53768	53908	54139
80	57238	57340	57443	57523	57617	57809	58094	58277	58474	58673
70	59577	59646	60040	60136	60210	60294	60476	60654	60832	61093
60	62251	62336	63027	63118	63189	63272	63462	63691	63956	64303
50	66621	66755	66846	66937	67008	67091	67261	67513	67744	68155
40	71201	71249	71384	71464	71552	71634	71814	72077	72139	72426
30	77057	77156	77263	77370	77454	77553	77753	78051	78115	78424
25	80823	81015	81031	81167	81237	81361	81559	81774	81990	82208
20	85011	85531	85660	85849	86007	86247	86606	86833	87062	87300
15	91417	91552	91699	91847	91962	92097	92372	92647	92947	93328
10	93824	100095	100277	100459	100600	100767	101106	101444	101611	102116

Table 140. Cumulative Frequency Distribution of Standard Pressure Level Heights for San Nicolas Island Spring

PRESSURE LEVEL (cm Hg)	SFC	Mt. Height (ft.)										96.0 +/- Sd
		1.0	2.28	5.0	10.0	15.87 +150	25.0	50.0 MFAN	75.0	90.0 +150	96.0 +150	
950	1635	1667	1701	1715	1762	1793	1857	1921	1952	1974	2013	2.47
900	3121	3143	3187	3221	3244	3279	3343	3407	3441	3449	3565	3.14
850	6692	6654	6731	6770	6800	6836	6904	6941	6945	6947	6948	5.16
800	6261	6102	6147	6392	6727	6864	6952	6976	6986	6986	6986	6.01
750	7932	7982	8037	8091	8133	8181	8284	8345	8352	8356	8356	6.94
700	9725	9777	9845	9852	9951	10008	10125	10249	10347	10410	10472	10.53
650	11597	11663	11735	11807	11864	11930	12064	12148	12244	12292	12450	12.64
600	13603	13684	13747	13860	13914	13990	14149	14294	14373	14444	14620	14.63
550	15765	15837	15929	16021	16093	16177	16334	16520	16694	16765	16945	16.94
500	18067	18163	18267	18371	18451	18547	18746	18934	19110	19110	19413	19.41
450	20560	20666	20782	20898	20988	21094	21209	21391	21536	21536	21771	21.77
400	23301	23419	23547	23676	23776	23894	24134	24273	24491	24542	24967	24.96
350	26314	26444	26545	26727	26837	27045	27231	27415	27625	27777	28148	28.14
300	29694	29839	29943	30146	30266	30406	30642	30978	31119	31245	31686	31.68
250	33592	33740	33902	34014	34190	34334	34639	34940	35059	35214	35638	35.63
200	38280	38425	38593	38742	38865	39010	39304	39509	39744	39825	40184	40.32
175	41083	41220	41370	41520	41637	41775	42054	42231	42476	42537	42847	42.84
150	44332	44459	44597	44715	44843	44969	45226	45484	45610	45718	45956	45.95
125	48130	48248	48377	48506	48634	48774	49033	49271	49421	49550	49796	49.79
100	52714	52828	52949	53069	53183	53273	53497	53722	53832	53942	54107	54.27
80	57267	57372	57487	57601	57690	57795	58009	58222	58327	58416	58750	58.75
70	59485	60089	60201	60313	60400	60501	60712	60921	61024	61111	61438	61.43
60	63114	63122	63135	63149	63157	63161	63182	64043	64117	64168	64498	64.49
50	66832	66939	67056	67173	67264	67371	67589	67606	67613	68004	68121	68.12
40	71384	71503	71630	71758	71857	71914	72449	72721	7256	72665	73037	73.03
30	77322	77554	77598	77742	77854	77985	78255	78323	78655	78757	79187	79.18
25	81131	81273	81428	81502	81703	81845	82133	82421	82562	82643	83136	83.13
20	85801	85958	86129	86191	86344	86591	86909	87224	87345	87518	87901	87.90
15	91305	92083	92277	92371	92621	92750	93159	93520	93649	94042	94413	94.41
10	10705	106904	101131	101354	101526	101729	102142	102556	102754	103154	103580	103.58

Table 141 Cumulative Frequency Distribution of Standard Pressure Level Heights for San Nicolas Island Summer

PRESSURE LEVELS IN HGS:	NO. OBSERVATIONS - SURFACE = 23220. TDP = 499				NO. OBSERVATIONS - 1000 FT = 18466. TDP = 499				NO. OBSERVATIONS - 2000 FT = 16966. TDP = 499			
	2024 -2550	1716 -2150	1714 -150	1687 -150	1781 -150	1827 -150	1846 -150	1865 -150	1696 -150	1696 -150	1696 -150	1696 -150
SFC	1690	1716	1714	1759	1781	1827	1846	1865	1696	1696	1696	1696
450	1667	1716	1715	1781	1804	1827	1846	1865	1697	1697	1697	1697
300	1194	1716	1715	1781	1804	1827	1846	1865	1697	1697	1697	1697
150	6172	1716	1715	1781	1804	1827	1846	1865	1697	1697	1697	1697
600	6464	6410	6406	6475	6464	6475	6464	6475	6464	6464	6464	6464
750	4194	4278	4278	4250	4317	4250	4317	4250	4317	4250	4317	4250
900	12549	10187	10187	10233	10277	10367	10468	10502	10502	10502	10502	10502
1050	12519	12121	12121	12214	12249	12367	12470	12520	12520	12520	12520	12520
1200	12517	12121	12121	12247	12367	12470	12520	12562	12562	12562	12562	12562
1350	1004	10124	10124	10361	10401	10451	10515	10615	10615	10615	10615	10615
1500	14561	16821	16821	16901	16981	16981	16982	16982	16982	16982	16982	16982
1650	14561	16821	16821	16901	16981	16981	16982	16982	16982	16982	16982	16982
1800	14561	16821	16821	16901	16981	16981	16982	16982	16982	16982	16982	16982
1950	21307	21644	21644	21683	21752	21900	21965	22116	22116	22116	22116	22116
2100	20016	20450	20450	20587	20646	20806	20937	21046	21046	21046	21046	21046
2250	21843	21843	21843	21843	21843	21843	21843	21843	21843	21843	21843	21843
2400	10434	10434	10434	10434	10434	10434	10434	10434	10434	10434	10434	10434
2550	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
2700	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
2850	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
3000	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
3150	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
3300	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
3450	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
3600	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
3750	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
3900	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
4050	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
4200	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
4350	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
4500	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
4650	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
4800	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
4950	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
5100	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
5250	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
5400	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
5550	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
5700	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
5850	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
6000	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
6150	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
6300	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
6450	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
6600	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
6750	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
6900	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
7050	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
7200	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
7350	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
7500	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
7650	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
7800	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
7950	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
8100	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
8250	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
8400	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
8550	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
8700	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
8850	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
9000	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
9150	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
9300	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
9450	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
9600	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
9750	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
9900	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
10050	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
10200	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
10350	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
10500	32417	31279	31279	31293	31391	31591	31591	31591	31591	31591	31591	31591
10650	15502	15129	15129	15136	15136	15136	15136	15136	15136	15136	15136	15136
10800	96114	134467	134467	13609	140102	140221	140694	14115	14115	14115	14115	14115
10950	2788	42707	42707	42773	43000	43244	43608	43723	43723	43723	43723	43723
11100	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454	45454
11250	49242	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142	49142
11400	32417	31279	31279</									

Table 14-2 Cumulative Frequency Distribution of Standard Pressure Level Heights for San Nicolas Island Autumn

While the frequency of Cl^- is constant at 2345, Li^+ is 1005.

Table 14: Cumulative Frequency Distribution of Standard Pressure Level Heights for Point Mugu, California.

Table 144. Cumulative Frequency Distribution of Standard Pressure Level Heights for Point Mugu, California: Winter
NO. OBSERVATIONS -- SURFACE = 1161. TNP = 318

PRESSURE LEVEL (inHS)	Height (feet)										MEAN +1SD	MEAN -1SD	95.0	96.0	97.0	97.5	99.0
	1.0	2.28	5.0	10.0	15.87	25.0	50.0	75.0	84.13	91.0							
SFC	241	282	325	367	400	439	514	598	636	670	712	755	794				
1000	1632	1680	1725	1770	1804	1846	1929	2013	2054	2094	2134	2178	2220				
950	3145	3194	3241	3278	3321	3409	3497	3540	3577	3624	3671	3715					
900	4613	4662	4715	4764	4810	4858	4957	5056	5105	5146	5199	5253	5301				
850	6194	6253	6314	6374	6421	6476	6584	6760	6755	6802	6862	6923	6978				
800	7664	7927	7996	8066	8120	8184	8314	8443	8507	8561	8631	8701	8765				
750	9621	9695	9773	9851	9911	9983	10128	10273	10344	10415	10483	10561	10634				
700	11430	11572	11660	11749	11818	11899	12064	12229	12310	12319	12467	12556	12637				
650	13474	13566	13665	13765	13842	13933	14117	14393	14670	14859	14969	15069	15169				
600	15611	15712	15822	15932	16017	16118	16322	16527	16627	16713	16823	16932	17033				
550	17911	18022	18142	18263	18356	18467	18691	18915	19026	19119	19240	19360	19471				
500	20407	20528	20660	20793	20996	21017	21263	21509	21631	21733	21866	21998	22119				
450	23103	23238	23386	23533	23648	23784	24058	24333	24469	24583	24731	24879	25014				
400	26094	26247	26409	26570	26696	26845	27146	27447	27595	27722	27883	28045	28193				
350	29623	29798	29972	30108	30289	30594	30919	31215	31490	31755	32135	32425	32725				
300	33336	33504	33687	33870	34012	34186	34521	34862	35030	35155	35538	35706					
250	38007	38173	38353	38534	38675	38840	39176	39513	39678	39819	40009	40180	40346				
175	40804	40965	41139	41314	41450	41610	41936	42261	42421	42557	42732	42907	43167				
150	44044	44193	44356	44519	44646	44795	45095	45372	45551	45618	45841	46004	46153				
125	47863	47999	48146	48294	48409	48544	48819	49094	49229	49346	49491	49639	49774				
100	52476	52595	52725	52855	52956	53075	53317	53559	53778	53999	54158						
80	57044	57149	57264	57378	57487	57572	57782	57999	58104	58193	58307	58422	58527				
70	59760	59859	59966	60074	60157	60256	60451	60656	60755	60858	61053	61152					
60	62873	62974	63081	63186	63268	63364	63560	63755	63952	63933	64144	64240	64339				
50	66577	66673	66778	66883	66985	67062	67257	67453	67549	67631	67736	67861	67938				
40	71201	71312	71423	71509	71611	71618	72024	72126	72212	72323	72434	72536					
30	76964	77071	77198	77320	77415	77526	77753	77979	78071	78107	78428	78540					
25	80707	80823	80951	81079	81178	81295	81532	81770	81946	82113	82241	82358					
20	85285	85417	85561	85705	85917	85949	86217	86485	86617	86730	86874	87018	87150				
15	91235	91385	91448	91711	91437	91987	92270	92503	92743	92880	93033	93196	93345				
10	99671	99846	100036	100226	100374	100548	100932	101256	101470	101578	101769	101959	102133				

Table 145. Cumulative Frequency Distribution of Site and Pressure Level Heights for Point Mugu, California. Spring

Table 146 Cumulative Frequency Distribution of Standard Pressure Level Heights for Point Mugu, California: Summer

Table 147. Cumulative Frequency Distribution of Standard Pressure Level Heights for Point Mugu, California: Autumn

NO. OBSERVATIONS == SURFACE = 1022. TNP = 349

PRESSURE LEVEL (MASL)	1.0 -2.50	Cumulative Frequency (Percent)			Mean +150			Mean -150		
		16.0	15.87	15.7	50.0	50.0	50.0	84.0	84.0	84.0
SFC	20.2	233	267	301	328	359	423	518	545	616
1000	16.1	1673	1709	1746	1772	1806	1870	1969	1946	2031
950	31.7	3179	3216	3252	3281	3314	3451	3444	3549	3086
900	87.7	4754	4794	4814	4902	4965	4977	5052	5160	5237
850	80.0	6398	6444	6490	6526	6568	6654	6734	6863	6952
800	63.4	8130	8143	8216	8274	8324	8425	8573	8614	8769
750	40.1	9451	10011	10071	10119	10173	10285	10398	10453	10650
700	9.36	11955	12023	12077	12123	12172	12261	12457	12579	12710
650	1.14	13494	14022	14099	14160	14232	14377	14593	14654	14732
600	134.7	16135	16226	16312	16381	16462	16627	16873	16942	17119
550	16.54	16400	16501	16609	16776	16947	17052	17437	17495	17201
500	1.84	21066	21177	21294	21375	21416	21481	21800	21991	22189
450	0.95	22955	23979	24103	24194	24313	24544	24848	25109	25347
400	0.0	23741	27060	27197	27303	27429	27644	27949	28171	28445
350	-0.79	30217	30374	30676	30794	30931	31214	31634	31903	32192
300	-1.52	34327	34492	34656	34783	34918	35240	35545	35923	36302
250	-2.27	39045	39217	39384	39521	39678	39947	40315	40498	41105
200	-3.04	41646	41992	42103	42297	42454	42772	43091	43391	43724
175	-3.64	44584	45151	45319	45449	45603	45915	46227	46512	46847
150	-4.13	48551	48857	49016	49140	49287	49583	49880	50170	50615
125	-4.51	51189	51331	51449	51596	51732	54049	54423	54548	54972
100	-5.00	57654	57746	57934	58048	58174	58442	58715	58835	59229
80	-5.72	60322	60669	60714	60850	61115	61381	61512	61624	62040
70	-6.01	63606	63554	63703	63819	63955	64232	64509	64666	64761
60	-6.28	67080	67238	67397	67520	67665	67959	68254	68539	68864
50	-6.45	71451	71611	71783	71956	72144	72569	72890	73142	73727
40	-6.51	77321	77500	77695	77890	78041	78220	78583	78945	79276
30	-6.57	81131	81227	81442	81657	81824	82021	82421	82821	83401
25	-6.63	85617	85817	86091	86522	86742	87184	87635	88115	88713
20	-6.54	91661	91840	92159	92428	92845	93386	93897	94118	94760
15	-6.41	100495	100807	101119	101362	101667	102229	102694	103136	103460
10	-6.01	110011	110495	110895	111297	111697	112264	112736	113248	113746

STANDARD AND MONTHLY MEAN ATMOSPHERIC VALUES

Table 148 lists the Standard Atmosphere values of height, temperature, and density at the pressure levels designated as "standard" for meteorological purposes (from reference 10). It is these values that are used most often as the reference in determining the departure of observed or mean upper-air data from a standard value.

Table 148. Standard Pressure Levels—Height, Pressure, and Density

(From 1962 U.S. Standard Atmosphere)

Pressure (Millibars,	Height (Meters) (Geopotential)	Height (Feet)	Temperature (Degrees Celsius)	Temperature (Degrees Kelvin)	Density (Grams Meter ⁻³)
1013.2	0	0	+15.0	288.2	1225.0
1000	111	364	+14.4	287.5	1213.3
950	540	1,772	+11.4	284.6	1161.6
900	988	3,241	+8.5	281.7	1111.7
850	1,457	4,780	+5.6	278.7	1063.4
800	1,949	6,394	+2.3	275.5	1011.6
750	2,466	8,091	-0.9	272.2	961.8
700	3,012	9,882	-4.5	268.7	909.3
650	3,591	11,781	-8.4	264.8	854.5
600	4,206	13,799	-12.3	260.9	802.2
550	4,865	15,961	-16.5	256.6	748.4
500	5,574	18,287	-21.0	252.1	693.7
450	6,344	20,814	-26.2	246.9	634.9
400	7,185	23,573	-31.4	241.7	580.0
350	8,117	26,631	-37.5	235.6	519.7
300	9,164	30,066	-44.4	228.8	458.7
250	10,363	33,999	-52.2	221.0	395.9
200	11,784	38,661	-56.5	216.7	321.9
175	12,631	41,440	-56.5	216.7	279.1
150	13,608	44,646	-56.5	216.7	242.6
125	14,765	48,442	-56.5	216.7	200.9
100	16,180	53,084	-56.5	216.7	161.3
80	17,595	57,726	-56.5	216.7	128.6
70	18,442	60,505	-56.5	216.7	112.5
60	19,419	63,711	-56.5	216.7	96.4
50	20,576	67,507	-55.9	217.3	80.7
40	22,000	72,178	-54.5	218.7	63.7
30	23,849	78,245	-52.7	220.5	47.4
25	25,029	82,116	-51.5	221.7	39.1
20	26,481	86,880	-50.0	223.1	31.2
15	28,368	93,071	-48.1	225.0	23.2
10	31,057	101,886	-45.5	227.7	15.6
7	33,453	109,753	-40.4	232.6	10.5
5	35,776	117,377	-33.8	239.0	7.3
4	37,535	122,551	-29.5	243.7	5.7
3	39,429	129,362	-23.7	247.4	4.2
2	42,440	139,239	-15.2	258.0	2.7
1	47,820	156,890	-2.5	270.7	1.3

Annual, seasonal, and monthly listings of temperature, pressure-height, and relative humidity at these levels to 10 mb for San Nicolas Island and Point Mugu are given in tables 149 through 165 and 166 through 182, respectively. In these two sets of tables, the mean height and temperature and their standard deviations are listed at each level, along with the median value of the relative humidity. These median values of humidity are given to the nearest 5 percent and are not listed once the mean temperature at a level is less than -40°C.

Table 149. Mean Upper Air Height and Temperature Data for San Nicolas Island: Annual

NO. OBSERVATIONS -- SURFACE = 9853 TOP = 3704

PRESSURE LEVEL (MB)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	15.1	3.9	75
950	1860	9.1	15.6	5.9	45
900	3366	9.8	19.7	6.8	25
850	4951	11.2	13.4	6.8	25
800	6617	13.5	11.4	5.4	25
750	8376	16.4	9.4	5.0	25
700	10236	19.4	5.1	5.7	25
650	12201	22.5	1.3	5.4	25
600	14304	26.2	-2.8	5.2	25
550	16535	30.2	-7.4	5.1	25
500	18957	34.1	-12.6	5.0	20
450	21558	39.0	-19.4	5.0	15
400	24416	44.0	-24.8	4.9	15
350	27556	49.5	-32.1	4.9	15
300	31066	55.0	-40.3	4.7	15
250	35069	62.0	-48.4	4.6	0
200	39790	69.7	-56.3	4.4	0
175	42552	67.3	-58.3	4.0	0
150	45709	65.0	-61.4	3.9	0
125	49393	60.4	-64.1	4.2	0
100	53855	54.4	-64.7	3.9	0
80	58314	52.5	-64.6	3.4	0
70	61001	52.8	-63.0	3.1	0
60	64124	54.1	-61.2	3.0	0
50	67854	57.1	-59.1	3.1	0
40	72470	62.0	-56.6	3.2	0
30	78494	68.9	-53.6	3.5	0
25	82362	73.5	-51.7	3.7	0
20	87133	80.1	-49.4	4.0	0
15	93369	88.6	-46.4	4.4	0
10	102293	103.0	-42.0	5.0	0

Table 150. Mean Upper-Air Height and Temperature Data for San Nicolas Island: Winter

NO. OBSERVATIONS -- SURFACE = 1962 TOP = 778

PRESSURE LEVEL (MBRS)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	571 0	13.1 3.3	75
950	1916 115	12.8 4.6	45
900	3402 125	10.9 4.8	25
850	4961 138	8.7 4.7	25
800	6598 157	6.4 4.6	25
750	8323 180	3.7 4.4	25
700	10154 200	.6 4.2	25
650	12083 226	-3.0 4.1	25
600	14154 253	-7.1 4.0	25
550	16348 274	-11.7 3.9	25
500	18734 304	-16.8 3.8	25
450	21289 341	-22.5 3.7	25
400	24104 374	-28.9 3.7	25
350	27192 407	-36.3 3.4	25
300	30640 440	-44.3 3.3	0
250	34577 466	-52.5 3.7	0
200	39239 466	-57.9 5.2	0
175	41995 449	-58.8 5.1	0
150	45164 427	-60.0 4.2	0
125	48875 387	-62.6 3.8	0
100	53360 334	-65.2 4.0	0
80	57808 285	-65.7 3.8	0
70	60476 266	-64.8 3.4	0
60	63442 253	-63.5 3.1	0
50	67261 253	-61.7 2.8	0
40	71814 262	-59.7 2.8	0
30	77753 299	-57.1 2.9	0
25	81558 322	-55.4 3.2	0
20	86247 354	-53.4 3.5	0
15	92372 410	-50.6 4.2	0
10	101106 505	-46.6 4.7	0

Table 151. Mean Upper Air Height and Temperature Data for San Nicolas Island: Spring

NO. OBSERVATIONS -- SURFACE = 2144 TOP = 887

PRESSURE LEVEL (MBR)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	571 0	13.5 3.4	75
950	1857 95	12.9 5.1	55
900	3343 95	11.9 5.6	35
850	4908 108	10.1 5.6	25
800	6552 125	7.7 5.3	25
750	8284 151	4.9 5.1	25
700	10125 174	1.8 4.8	25
650	12064 209	-1.8 4.5	20
600	14144 230	-5.9 4.3	20
550	16348 256	-10.6 4.1	15
500	18740 289	-15.7 3.9	15
450	21309 322	-21.5 3.7	15
400	24134 358	-28.0 3.6	15
350	27231 394	-35.4 3.3	15
300	30692 427	-43.5 3.0	0
250	34639 444	-51.9 3.0	0
200	39304 440	-59.2 4.5	0
175	42054 417	-59.0 4.9	0
150	45226 384	-59.3 3.9	0
125	48963 358	-60.7 3.1	0
100	53497 335	-62.6 3.2	0
80	58009 318	-62.7 3.1	0
70	60712 312	-61.9 2.9	0
60	63852 319	-60.7 2.7	0
50	67589 326	-59.9 2.7	0
40	72211 354	-56.3 2.7	0
30	78255 400	-53.4 2.8	0
25	82131 430	-51.3 3.0	0
20	86909 476	-48.7 3.4	0
15	93159 538	-45.2 3.6	0
10	102142 617	-40.1 3.8	0

Table 152. Mean Upper-Air Height and Temperature Data for San Nicolas Island: Summer

NO. OBSERVATIONS -- SURFACE = 2382 TOP = 999

PRESSURE LEVEL (MB)	MEAN HEIGHT (FEET)	MEAN TEMP. (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	16.3	3.5	85
950	1827	18.8	5.8	45
900	3353	21.4	5.1	25
850	4970	20.1	4.5	25
800	6677	17.4	3.9	25
750	8468	14.0	3.4	25
700	10367	10.3	3.0	25
650	12369	6.2	2.7	25
600	14511	1.9	2.6	25
550	16781	-2.8	2.6	25
500	19245	-7.9	2.5	15
450	21900	-13.7	2.5	15
400	24806	-20.0	2.6	15
350	28009	-27.2	2.8	15
300	31591	-35.5	2.8	15
250	35673	-44.5	2.7	0
200	40469	-54.1	2.5	0
175	43248	-58.8	2.5	0
150	46391	-63.1	3.0	0
125	50039	-66.6	3.5	0
100	54459	-66.9	3.2	0
80	58911	-64.0	2.4	0
70	61614	-61.6	2.0	0
60	64764	-59.1	1.8	0
50	68537	-56.6	1.6	0
40	73215	-53.8	1.5	0
30	79327	-50.5	1.6	0
25	83245	-48.5	1.7	0
20	88087	-46.0	1.9	0
15	94409	-42.8	2.2	0
10	103478	-38.0	2.7	0

Table 153 Mean Upper-Air Height and Temperature Data for San Nicolas Island: Autumn

NO. OBSERVATIONS = 2365 SURFACE = 2365 TOP = 1045

PRESSURE LEVEL (MB)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	6	16.7	3.8	75
950	1854	95	17.4	5.5	45
900	3366	95	17.4	5.7	25
850	4961	102	15.5	5.4	25
800	6640	118	12.8	5.1	25
750	8406	134	9.8	4.7	25
700	10772	157	6.4	4.5	25
650	12251	180	2.8	4.3	25
600	14364	207	-1.2	4.1	25
550	16611	233	-5.7	4.0	15
500	19749	262	-10.9	3.9	15
450	21667	292	-16.8	3.7	15
400	24541	328	-23.2	3.6	15
350	27700	364	-30.6	3.5	15
300	31230	404	-38.9	3.7	15
250	35259	436	-47.4	3.4	0
200	40007	459	-55.6	3.6	0
175	42772	454	-54.2	3.4	0
150	45915	449	-62.8	3.2	0
125	49573	427	-66.0	3.3	0
100	53993	394	-67.6	3.3	0
80	58415	545	-65.9	3.0	0
70	61089	384	-64.0	2.8	0
60	64203	400	-61.9	2.7	0
50	67927	427	-59.7	2.7	0
40	72530	469	-57.1	2.8	0
30	78543	531	-54.0	2.9	0
25	82398	577	-52.2	3.2	0
20	87152	630	-50.0	3.3	0
15	93353	705	-47.4	3.6	0
10	102208	817	-43.8	4.0	0

Table 154. Mean Upper-Air Height and Temperature Data for San Nicolas Island: January

NO. OBSERVATIONS -- SURFACE = 675 TOP = 252

PRESSURE LEVEL (MHS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	12.7	3.2	75
450	1929	104	12.1	4.4	35
900	3415	115	10.0	4.6	30
850	4470	124	8.0	4.4	25
800	6604	144	5.8	4.2	25
750	8323	167	3.2	4.1	25
700	10151	187	-1.1	4.0	25
650	12077	213	-3.5	3.9	25
600	14147	236	-7.2	3.9	25
550	16335	262	-12.0	3.8	25
500	18720	295	-17.2	3.8	25
450	21270	325	-22.9	3.8	25
400	24085	361	-29.3	3.7	25
350	27165	400	-36.6	3.4	25
300	30610	433	-44.7	3.1	0
250	34541	454	-52.9	3.5	0
200	39193	454	-58.2	5.2	0
175	41949	446	-58.9	5.2	0
150	45118	423	-59.9	4.2	0
125	48835	387	-62.3	3.7	0
100	53323	334	-65.0	3.9	0
80	57776	289	-65.2	3.6	0
70	60446	264	-64.3	3.2	0
60	63550	259	-62.9	2.8	0
50	67247	266	-61.1	2.6	0
40	71814	274	-59.2	2.6	0
30	77759	315	-56.9	2.9	0
25	81565	334	-55.3	3.2	0
20	86253	367	-53.5	3.3	0
15	92375	407	-51.2	3.4	0
10	101109	482	-46.9	4.9	0

Table 155 Mean Upper Air Height and Temperature Data for San Nicolas Island - February

NO. OBSERVATIONS = SURFACE = 624 TOP = 248

PRESSURE LEVEL (MB)	MEAN HEIGHT (FEET)	MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	13.3	3.5	75
950	1916	13.1	4.6	35
900	3406	11.2	4.7	25
850	4964	8.9	4.5	25
800	6601	6.4	4.3	25
750	8327	3.8	4.0	25
700	10157	.5	3.7	25
650	12087	-3.2	3.5	20
600	14157	-7.4	3.4	15
550	16348	-12.1	3.3	15
500	18727	-17.3	3.3	25
450	21280	-22.1	3.3	25
400	24085	-24.6	3.3	25
350	27162	-37.0	3.2	35
300	30600	-45.0	3.3	0
250	34524	-53.1	4.0	0
200	39180	-57.7	5.6	0
175	41946	-57.8	4.9	0
150	45131	-59.1	3.8	0
125	48858	-61.9	3.4	0
100	53356	-64.9	3.8	0
80	57812	-65.8	3.7	0
70	60476	-66.0	3.3	0
60	63570	-63.9	3.2	0
50	67251	-62.1	3.2	0
40	71804	-59.7	3.4	0
30	77746	-56.9	3.0	0
25	81575	-55.7	2.8	0
20	86280	-52.4	2.9	0
15	92457	-49.8	3.5	0
10	101265	-45.4	3.9	0

Table 156. Mean Upper-Air Height and Temperature Data for San Nicolas Island: March

NO. OBSERVATIONS -- SURFACE = 756 TOP = 241

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	571 0	12.9 3.1	75
950	1880 102	12.2 4.5	45
900	3363 105	10.5 4.8	35
850	4918 118	8.3 4.7	25
800	6552 135	5.7 4.6	25
750	8271 151	2.9 4.4	25
700	10095 177	-0.2 4.1	25
650	12021 203	-3.7 3.9	25
600	14088 226	-7.8 3.8	25
550	16276 249	-12.5 3.6	25
500	18652 279	-17.7 3.5	25
450	21201 304	-23.4 3.3	25
400	24003 334	-29.9 3.3	25
350	27077 367	-37.2 2.9	25
300	30512 394	-45.0 2.6	0
250	34432 407	-53.2 3.0	0
200	39081 381	-58.2 5.2	0
175	41837 354	-58.1 5.2	0
150	45020 328	-58.8 3.7	0
125	48757 305	-61.0 4.2	0
100	53284 272	-63.3 3.2	0
80	57782 240	-63.6 3.0	0
70	60476 233	-62.8 2.7	0
60	63602 230	-61.7 2.6	0
50	67320 230	-60.1 2.6	0
40	71916 244	-57.8 2.6	0
30	77913 282	-54.9 2.7	0
25	81762 302	-53.1 3.1	0
20	86506 335	-50.6 3.7	0
15	92707 400	-47.2 4.3	0
10	101608 489	-41.8 4.3	0

Table 157. Mean Upper-Air Height and Temperature Data for San Nicolas Island: April

NO. OBSERVATIONS -- SURFACE = 679 TOP = 321

PRESSURE LEVEL (MB)S)	MEAN HEIGHT (FEET)	MEAN TEMPERATURE (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
	S.D.	S.D.	
SFC	571	3.7	75
950	1850	5.6	50
900	3337	6.1	35
850	4898	6.1	25
800	6539	5.6	25
750	8264	5.4	25
700	10102	5.1	20
650	12034	4.7	15
600	14111	4.5	15
550	16312	4.1	15
500	18701	3.7	15
450	21263	3.5	15
400	24085	3.2	15
350	27178	2.8	15
300	30636	2.6	0
250	34577	2.7	0
200	39236	4.6	0
175	41982	5.1	0
150	45154	4.1	0
125	48891	3.1	0
100	53432	3.4	0
80	57949	3.5	0
70	60653	3.2	0
60	63796	3.0	0
50	67536	2.7	0
40	72162	2.6	0
30	78205	2.6	0
25	82080	2.8	0
20	86860	2.8	0
15	93119	2.0	0
10	102106	3.3	0

Table 158. Mean Upper-Air Height and Temperature Data for San Nicolas Island: May

NO. OBSERVATIONS -- SURFACE = 709 TOP = 325

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	571 0	14.0 3.4	75
950	1841 82	13.7 5.0	65
900	3333 79	13.8 5.4	35
850	4908 89	12.5 5.0	25
800	6568 102	10.3 4.6	25
750	8317 125	7.6 4.2	25
700	10174 141	4.5 3.9	20
650	12136 161	.8 3.6	15
600	14232 180	-3.4 3.5	15
550	16460 203	-8.1 3.3	15
500	18875 226	-13.3 3.1	15
450	21470 253	-19.1 2.9	15
400	24318 279	-25.6 3.0	15
350	27444 308	-33.2 2.8	15
300	30935 335	-41.4 2.4	0
250	34918 354	-50.1 2.3	0
200	39606 344	-57.9 3.6	0
175	42356 325	-59.7 4.2	0
150	45515 292	-59.8 3.7	0
125	49245 266	-60.7 3.0	0
100	53783 246	-62.1 2.9	0
80	58304 226	-62.3 2.7	0
70	61014 217	-61.3 2.4	0
60	64160 210	-59.8 2.2	0
50	67917 213	-57.7 2.2	0
40	72566 226	-54.9 2.1	0
30	78652 253	-51.5 2.1	0
25	82552 276	-49.5 2.1	0
20	87369 305	-46.7 2.2	0
15	93665 351	-43.5 2.3	0
10	102687 404	-38.6 2.8	0

Table 159. Mean Upper Air Height and Temperature Data for San Nicolas Island: June

NO. OBSERVATIONS -- SURFACE = 755 TOP = 310

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	57. 0	14.7 3.0	85
950	1801 75	15.6 5.6	65
900	3310 75	18.0 6.0	30
850	4915 92	17.1 5.6	25
800	6601 112	14.8 4.9	25
750	8379 135	11.9 4.3	25
700	10262 151	8.6 3.8	20
650	12251 174	4.8 3.6	15
600	14380 194	.7 3.4	15
550	16647 217	-3.9 3.3	15
500	18970 240	-9.3 3.2	15
450	21732 266	-15.3 2.9	15
400	24619 289	-21.8 2.9	15
350	27799 318	-29.3 2.8	15
300	31345 348	-37.7 2.5	15
250	35390 374	-46.7 2.4	0
200	40148 387	-55.5 2.9	0
175	42917 384	-59.0 3.4	0
150	4608 364	-61.6 3.6	0
125	49747 325	-64.2 3.7	0
100	54209 272	-65.2 3.5	0
80	58615 233	-63.5 2.9	0
70	51388 220	-61.6 2.3	0
60	64537 217	-59.3 1.9	0
50	58304 220	-56.8 1.7	0
40	72976 233	-53.9 1.6	0
30	79094 256	-50.5 1.8	0
25	83012 249	-48.4 1.6	0
20	87858 269	-45.8 1.8	0
15	94186 294	-42.2 2.1	0
10	103281 351	-37.4 2.5	0

Table 160. Mean Upper-Air Height and Temperature Data for San Nicolas Island: July

NO. OBSERVATIONS -- SURFACE = 795 TOP = 351

PRESSURE LEVEL (MBS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	16.5	3.4	85
950	1837	59	20.2	5.1	40
900	3369	59	23.1	3.1	25
850	5000	62	21.7	2.7	25
800	6713	69	18.8	2.3	25
750	8514	75	15.3	2.0	25
700	10420	82	11.4	1.8	25
650	12431	89	7.0	1.8	25
500	14577	92	2.5	1.8	25
550	16854	98	-2.3	1.8	25
500	19321	105	-7.3	1.8	25
450	21982	118	-12.9	1.9	15
400	24898	131	-19.1	1.9	15
350	28114	148	-26.0	2.2	15
300	31713	174	-34.3	2.3	15
250	35817	200	-43.3	2.1	0
200	40640	217	-53.2	1.9	0
175	43428	217	-58.5	2.0	0
150	46568	203	-63.8	2.4	0
125	50197	190	-67.8	2.6	0
100	54593	167	-67.9	2.4	0
80	59032	167	-64.3	2.1	0
70	61726	171	-61.8	1.9	0
60	64879	180	-59.7	1.7	0
50	68652	194	-56.4	1.5	0
40	73333	207	-53.6	1.5	0
30	79452	207	-50.3	1.6	0
25	83373	223	-48.3	1.7	0
20	88222	246	-45.8	1.9	0
15	94554	272	-42.5	2.1	0
10	103629	327	-37.6	2.6	0

Table 161. Mean Upper-Air Height and Temperature Data for San Nicolas Island: August

N. OBSERVATIONS -- SURFACE = 830 TOP = 338

PRESSURE LEVEL (MB)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	17.5	3.4	85
950	1837	62	20.4	5.2	45
900	3373	64	22.9	4.1	25
850	5000	72	21.3	3.4	25
800	6709	82	18.4	2.8	25
750	8507	92	14.8	2.4	25
700	10413	102	10.9	2.1	25
650	12414	112	6.7	2.0	25
600	14564	114	2.3	2.0	25
550	16841	124	-2.2	2.0	25
500	19311	131	-7.2	2.0	15
450	21969	141	-12.9	1.9	15
400	24884	157	-14.1	1.9	15
350	28100	174	-26.3	2.2	15
300	31696	197	-34.7	2.3	15
250	35791	226	-43.8	2.3	0
200	40600	253	-53.7	1.9	0
175	43383	256	-58.8	1.8	0
150	46522	243	-63.8	2.3	0
125	50157	220	-67.6	3.0	0
100	54557	194	-67.6	2.9	0
80	59003	187	-64.1	2.2	0
70	61706	187	-51.5	1.8	0
60	64862	194	-58.9	1.6	0
50	68638	200	-56.5	1.4	0
40	73314	213	-53.9	1.5	0
30	79419	230	-50.7	1.5	0
25	83333	246	-48.9	1.8	0
20	88163	272	-46.5	2.0	0
15	94472	308	-43.5	2.2	0
10	103504	371	-39.0	2.6	0

Table 162. Mean Upper Air Height and Temperature Data for San Nicolas Island: September

NO. OBSERVATIONS -- SURFACE = 800 TOP = 736

PRESSURE LEVEL (MHS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCFNT)
SFC	571	0	17.7	3.6	75
950	1304	79	18.8	5.5	55
900	3330	79	20.3	4.8	25
850	4941	89	18.8	4.0	25
800	6637	98	16.1	3.3	25
750	8422	112	12.8	2.8	25
700	10315	125	9.3	2.6	25
650	12310	135	5.5	2.6	25
600	14446	148	1.5	2.5	25
550	16716	157	-3.1	2.3	15
500	19177	171	-8.2	2.2	15
450	21824	184	-14.1	2.0	15
400	24728	200	-20.5	2.0	15
350	27920	217	-27.9	2.1	15
300	31493	236	-36.2	2.3	15
250	35564	253	-44.9	2.5	0
200	40358	262	-53.9	2.5	0
175	43140	262	-58.4	2.3	0
150	46283	253	-62.3	2.5	0
125	49931	233	-66.8	2.9	0
100	54337	213	-67.7	2.8	0
80	58766	213	-65.0	2.4	0
70	61453	217	-62.6	2.2	0
60	64593	220	-60.0	2.2	0
50	68350	233	-57.5	2.0	0
40	73002	253	-54.9	1.9	0
30	79085	272	-51.7	1.9	0
25	82992	275	-49.7	2.0	0
20	87795	294	-47.6	2.1	0
15	94064	338	-44.9	2.3	0
10	103018	413	-41.3	2.7	0

Table 163. Mean Upper-Air Height and Temperature Dat. for San Nicolas Island: October

NO. OBSERVATIONS -- SURFACE = 806 TOP = 383

PRESSURE LEVEL (MBS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	17.6	4.0	75
950	1857	85	12.5	5.3	45
900	3376	92	18.1	5.0	30
850	4974	105	16.1	4.4	25
800	6654	115	13.3	4.0	25
750	8422	131	10.1	3.8	25
700	10295	148	6.8	3.7	25
650	12274	167	3.2	3.6	25
600	14390	184	-0.8	3.4	20
550	16640	207	-5.5	3.3	15
500	19078	226	-10.9	3.1	15
450	21649	249	-16.8	3.0	15
400	24570	272	-23.2	2.9	15
350	27730	302	-30.9	2.8	15
300	31257	324	-34.1	2.4	15
250	35282	338	-47.6	2.8	0
200	40026	331	-55.6	3.4	0
175	42792	322	-59.1	3.2	0
150	45938	305	-62.6	3.0	0
125	49596	279	-65.9	2.9	0
100	54016	243	-67.9	3.2	0
80	58425	223	-66.4	2.8	0
70	61096	213	-64.5	2.5	0
60	64199	217	-62.3	2.3	0
50	67920	226	-59.8	2.1	0
40	72523	246	-57.0	2.1	0
30	78547	276	-53.7	2.0	0
25	82415	284	-51.9	2.2	0
20	87178	322	-49.6	2.4	0
15	93376	374	-47.4	2.9	0
10	102215	456	-44.0	3.3	0

Table 164. Mean Upper-Air Height and Temperature Data for San Nicolas Island: November

NO. OBSERVATIONS -- SURFACE = 752 TOP = 326

PRESSURE LEVEL (MB)	HEIGHT MEAN (FEET) S.D.	TEMPERATURE MEAN (DEG. CELSIUS) S.D.	MEDIAN REL. HUM. (PERCENT)
SFC	571 0	15.3 3.4	75
950	1900 99	14.9 4.7	45
900	3399 98	13.4 4.9	35
850	4970 112	11.2 4.9	25
800	6624 131	8.7 4.8	25
750	8366 154	6.1 4.7	25
700	10210 177	3.0 4.5	25
650	12162 203	-0.5 4.3	25
600	14249 233	-4.4 4.1	25
550	16470 256	-8.9 3.9	25
500	18878 289	-14.0 3.8	25
450	21467 314	-19.6 3.6	25
400	24308 348	-26.0 3.5	25
350	27434 381	-33.3 3.2	25
300	30925 410	-41.4 2.7	0
250	34911 430	-49.3 3.0	0
200	39610 427	-57.4 4.0	0
175	42356 410	-60.2 4.2	0
150	45492 384	-67.7 4.0	0
125	49157 348	-65.3 3.9	0
100	53593 299	-67.0 3.8	0
80	58028 257	-66.5 3.5	0
70	60676 233	-65.1 3.0	0
60	63770 223	-63.5 2.5	0
50	67457 223	-61.8 2.1	0
40	72011 230	-59.7 2.0	0
30	77949 254	-56.8 2.3	0
25	81745 282	-55.1 2.7	0
20	86444 314	-53.0 2.9	0
15	92566 367	-50.2 3.3	0
10	101319 463	-46.5 3.9	0

Table 165. Mean Upper-Air Height and Temperature Data for San Nicolas Island: December

NO. OBSERVATIONS -- SURFACE = 663 TOP = 278

PRESSURE LEVEL (MHS)	HEIGHT MEAN (FEET)	S.D. (FEET)	TEMPERATURE MEAN (DEG. CELSIUS)	S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	571	0	13.2	3.2	75
950	1900	128	13.7	4.6	35
900	3386	138	11.5	5.0	30
850	4948	154	9.2	5.1	30
800	6588	174	6.9	5.1	25
750	8317	203	4.2	4.9	25
700	10151	226	1.2	4.8	25
650	12087	256	-2.3	4.6	25
600	14160	285	-6.4	4.5	25
550	16366	318	-10.9	4.3	25
500	18757	351	-15.9	4.0	25
450	21222	384	-21.5	3.8	25
400	24147	420	-27.9	3.7	25
350	27244	453	-35.2	3.4	25
300	30712	474	-43.1	3.2	0
250	34662	495	-51.5	3.5	0
200	39337	436	-57.8	4.3	0
175	42087	463	-59.5	5.0	0
150	45240	433	-61.0	4.3	0
125	48934	394	-67.4	4.1	0
100	53402	334	-65.7	4.4	0
80	57844	282	-66.0	4.2	0
70	60505	262	-65.1	3.7	0
60	63596	246	-63.8	3.1	0
50	67280	240	-62.0	2.6	0
40	71824	233	-60.2	2.4	0
30	77749	253	-57.4	2.8	0
25	81535	279	-56.0	3.3	0
20	86207	320	-54.2	3.9	0
15	92291	400	-51.7	4.4	0
10	100958	505	-48.2	4.6	0

Table 166. Mean Upper-Air Height and Temperature Data for Point Mugu, California: Annual

NO. OBSERVATIONS = SURFACE = 4617 TOP = 1418

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	14.9 4.6	75
1000	449 105	14.8 3.9	75
950	1877 102	15.0 5.7	55
900	3376 105	14.7 7.0	35
850	4957 113	13.2 7.2	35
800	6621 141	10.8 6.9	25
750	8376 174	7.7 6.5	25
700	10226 207	4.3 6.1	25
650	12192 243	-1.7 5.8	25
600	14285 282	-3.4 5.7	25
550	16522 322	-7.9 5.5	25
500	18934 367	-12.9 5.4	25
450	21549 417	-18.6 5.3	20
400	24390 467	-24.9 5.3	25
350	27513 525	-32.4 5.1	15
300	31017 581	-40.4 4.8	0
250	35013 653	-49.0 4.7	0
200	39741 702	-56.3 4.6	0
175	42507 705	-58.6 4.3	0
150	45666 682	-60.9 4.2	0
125	49360 636	-63.3 4.5	0
100	53834 577	-64.7 4.3	0
80	58314 551	-63.5 3.8	0
70	61007 551	-62.1 3.4	0
60	64150 571	-60.3 3.3	0
50	67897 600	-58.2 3.4	0
40	72523 653	-55.7 3.6	0
30	78563 725	-52.7 4.0	0
25	82408 778	-51.1 4.0	0
20	87192 850	-48.8 4.5	0
15	93402 944	-46.2 4.4	0
10	102303 1115	-41.9 5.4	0

Table 167. Mean Upper-Air Height and Temperature Data for Point Mugu, California: Winter

NO. OBSERVATIONS -- SURFACE = 1161 TOP = 318

PRESSURE LEVEL (MB)	MEAN HEIGHT (FEET)	S.D.	MEAN TEMPERATURE (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	11.7	75
1000	518	118	12.7	55
950	1929	125	11.8	45
900	3409	131	9.8	35
850	4957	148	7.5	35
800	6588	167	5.1	25
750	8314	194	2.6	25
700	10124	217	-0.4	25
650	12064	246	-3.9	25
600	14117	276	-7.8	25
550	16322	304	-12.3	25
500	18691	334	-17.3	25
450	21263	367	-22.8	25
400	24058	410	-29.0	25
350	27146	449	-36.3	25
300	30594	486	-44.3	0
250	34521	509	-52.6	0
200	39177	502	-59.0	0
175	41936	486	-59.6	0
150	45098	453	-59.7	0
125	48819	419	-61.9	0
100	53317	361	-64.3	0
80	57785	318	-64.6	0
70	60456	290	-63.4	0
60	63560	292	-62.6	0
50	67257	292	-61.4	0
40	71818	304	-59.2	0
30	77753	334	-56.8	0
25	81532	354	-55.3	0
20	86217	400	-53.5	0
15	92290	453	-51.4	0
10	100902	524	-47.5	0

Table 163. Mean Upper-Air Height and Temperature Data for Point Mugu, California: Spring

NO. OBSERVATIONS -- SURFACE = 1222 TOP = 332

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (UFG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	14.0 3.8	75
1000	453 89	13.4 3.3	75
950	1873 92	12.5 4.8	65
900	3356 98	11.5 5.6	45
850	4918 112	9.9 5.8	35
800	6562 131	7.5 5.6	30
750	8301 151	4.7 5.3	25
700	10128 180	1.5 5.1	25
650	12073 210	-2.1 4.9	25
600	14140 241	-6.0 4.8	20
550	16355 272	-10.5 4.6	20
500	18737 312	-15.6 4.5	15
450	21319 351	-21.3 4.3	15
400	24127 390	-27.8 4.1	15
350	27208 433	-35.3 3.9	15
300	30669 472	-43.3 3.5	0
250	34623 505	-51.6 3.5	0
200	39285 492	-57.8 4.9	0
175	42037 465	-58.4 5.1	0
150	45210 430	-58.7 4.2	0
125	48953 400	-59.9 3.4	0
100	53501 367	-61.3 3.4	0
80	58035 354	-61.2 3.7	0
70	60745 354	-60.4 2.9	0
60	63904 364	-59.2 2.9	0
50	67664 381	-57.4 3.1	0
40	72303 410	-54.9 3.3	0
30	78360 441	-51.9 3.4	0
25	82208 464	-50.3 3.3	0
20	87021 525	-47.6 3.7	0
15	93284 581	-44.4 4.0	0
10	102277 696	-39.4 4.0	0

Table 169. Mean Upper Air Height and Temperature Data for Point Mugu, California: Summer

NO. OBSERVATIONS -- SURFACE = 1152 TOP = 379

PRESSURE LEVEL (MHG)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 6	17.4 2.9	85
1000	394 66	16.3 2.5	85
950	1841 72	18.1 4.8	65
900	3356 75	20.4 5.3	35
850	4974 89	19.9 4.7	25
800	6677 105	17.5 3.9	25
750	8474 121	14.1 3.5	25
700	10367 138	10.4 3.1	25
650	12374 154	6.3 2.0	25
600	14511 167	2.0 2.8	30
550	16791 144	-2.6 2.7	25
500	19249 200	-7.7 2.7	25
450	21916 223	-13.4 2.0	20
400	24816 246	-19.7 2.0	20
350	28002 276	-27.1 3.0	15
300	31588 305	-35.5 3.0	15
250	35666 344	-44.6 3.0	0
200	40463 384	-54.0 2.6	0
175	43245 387	-58.6 2.6	0
150	46388 377	-62.9 3.1	0
125	50039 344	-66.0 3.7	0
100	54464 304	-68.3 3.5	0
80	58930 292	-63.0 2.9	0
70	61631 295	-60.7 2.4	0
60	64803 302	-58.2 2.2	0
50	68584 312	-55.5 2.1	0
40	73273 331	-52.9 2.0	0
30	79396 361	-49.6 2.3	0
25	83291 377	-47.9 2.1	0
20	98143 407	-45.3 2.4	0
15	94455 446	-42.4 2.4	0
10	103517 509	-37.6 2.8	0

Table 170. Mean Upper-Air Height and Temperature Data for Point Mugu, California: Autumn

NO. OBSERVATIONS -- SURFACE = 1082 TOP = 389

PRESSURE LEVEL (MBS)	HEIGHT MEAN (FEET)	TEMPERATURE MEAN (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	85
1000	423	9.8	75
950	1870	9.8	45
900	3383	10.2	35
850	4977	11.2	25
800	6654	12.8	25
750	8425	14.8	25
700	10285	16.7	25
650	12267	19.0	25
600	14377	21.7	25
550	16627	24.6	25
500	19052	27.6	20
450	21683	30.8	15
400	24544	34.4	15
350	27684	38.1	15
300	31214	42.0	15
250	35240	45.6	0
200	39997	47.6	0
175	42772	47.6	0
150	45915	46.6	0
125	49583	44.3	0
100	54009	41.3	0
80	58442	39.4	0
70	61115	39.7	0
60	64232	41.3	0
50	67959	44.0	0
40	72569	47.9	0
30	78583	54.1	0
25	82421	59.7	0
20	87188	66.6	0
15	93386	74.8	0
10	102228	86.6	0

Table 171. Mean Upper Air Height and Temperature Data for Point Mugu, California: January

NO. OBSERVATIONS -- SURFACE = 343 TOP = 102

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	11.1 4.9	75
1000	531 112	12.2 4.2	65
950	1942 121	11.1 5.0	45
900	3412 128	4.1 5.4	35
850	4961 144	6.8 5.4	35
800	6585 167	4.4 5.3	30
750	8310 194	2.0 5.1	25
700	10118 220	-1.0 4.4	25
650	12047 249	-4.4 4.7	25
600	14101 279	-8.3 4.6	25
550	16306 308	-12.8 4.4	25
500	18668 334	-17.7 4.4	25
450	21234 367	-23.4 4.4	25
400	24019 417	-29.6 4.2	25
350	27116 433	-36.9 3.8	15
300	30554 472	-44.9 3.3	0
250	34472 492	-53.3 3.6	0
200	39111 479	-58.4 5.4	0
175	41870 453	-58.6 5.3	0
150	45036 420	-59.1 4.5	0
125	48773 381	-61.2 4.2	0
100	53284 331	-63.7 4.4	0
80	57762 280	-64.0 4.0	0
70	60443 274	-63.2 3.5	0
60	63560 269	-61.7 3.1	0
50	67270 266	-60.2 2.8	0
40	71837 279	-58.7 2.6	0
30	77779 285	-56.5 2.8	0
25	81572 315	-55.1 3.1	0
20	86260 354	-53.6 3.2	0
15	92352 433	-51.4 3.7	0
10	101083 538	-47.2 4.7	0

Table 172. Mean Upper-Air Height and Temperature Data for Point Mugu, California: February

NO. OBSERVATIONS -- SURFACE = 331 TOP = 74

PRESSURE LEVEL (MHS)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	11.9 4.5	75
1000	531 108	12.8 3.5	65
950	1939 112	11.9 4.4	45
900	3422 118	10.0 4.7	35
850	4970 131	7.7 4.7	35
800	6601 144	5.2 4.6	25
750	8323 164	2.6 4.3	25
700	10141 187	-0.6 4.0	25
650	12070 207	-4.2 3.7	25
600	14127 230	-8.3 3.4	25
550	16322 253	-12.8 3.3	25
500	18684 276	-17.8 3.2	15
450	21250 299	-23.3 3.4	25
400	24039 331	-29.7 3.4	25
350	27116 371	-37.1 3.4	25
300	30554 413	-45.1 3.3	0
250	34462 444	-53.5 3.6	0
200	39111 463	-57.8 5.4	0
175	41877 459	-57.4 4.9	0
150	45046 436	-58.5 4.0	0
125	48783 400	-60.8 3.7	0
100	53304 361	-63.5 4.0	0
80	57785 331	-64.2 3.9	0
70	60446 292	-63.7 3.2	0
60	63553 282	-62.8 2.9	0
50	67251 285	-61.1 2.8	?
40	71847 302	-59.0 2.9	0
30	77777 341	-56.4 2.7	0
25	81608 367	-54.3 2.6	0
20	86319 404	-52.0 3.1	0
15	92434 440	-49.5 3.2	0
10	101106 440	-45.2 4.2	0

Table 173. Mean Upper-Air Height and Temperature Data for Point Mugu, California: March

NO. OBSERVATIONS -- SURFACE = 393 TOP = 97

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	12.8 3.9	75
1000	482 95	12.6 3.0	75
950	1893 98	11.6 4.4	55
900	3373 105	9.8 5.0	45
850	4924 118	7.7 4.8	35
800	6555 134	5.0 4.6	35
750	8278 157	2.3 4.4	25
700	10089 177	-0.8 4.3	25
650	12018 200	-4.4 4.2	25
600	14072 230	-8.2 4.1	25
550	16266 256	-12.7 3.9	25
500	18629 284	-17.8 3.9	15
450	21191 322	-23.5 3.7	15
400	23973 351	-30.0 3.5	15
350	27041 390	-37.4 3.4	15
300	30472 423	-45.0 3.2	0
250	34393 443	-52.9 3.2	0
200	39049 417	-57.6 5.5	0
175	41808 384	-57.6 5.3	0
150	44997 354	-58.2 3.8	0
125	48740 324	-60.0 3.1	0
100	53291 305	-61.9 3.2	0
80	57805 292	-62.1 2.8	0
70	60505 292	-61.5 2.6	0
60	63648 293	-60.4 2.7	0
50	67388 314	-58.8 2.9	0
40	71995 344	-56.6 3.2	0
30	78031 394	-53.6 3.2	0
25	81880 440	-51.8 3.3	0
20	86654 494	-49.3 4.1	0
15	92854 558	-46.0 5.4	0
10	101755 771	-41.5 5.3	0

Table 174. Mean Upper-Air Height and Temperature Data for Point Mugu, California: April

NO. OBSERVATIONS -- SURFACE = 413 TOP = 117

PRESSURE LEVEL (MBS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	13.8	75
1000	453	89	13.2	75
950	1870	95	12.2	65
900	3350	105	10.9	45
850	4908	121	9.0	35
800	6545	144	6.6	35
750	8278	171	3.7	25
700	10102	194	.5	25
650	12034	217	-3.0	25
600	14098	253	-6.9	25
550	16302	279	-11.4	25
500	18675	318	-16.5	15
450	21243	351	-22.1	15
400	24042	387	-28.6	15
350	27096	417	-36.1	15
300	30551	443	-43.9	0
250	34495	453	-52.2	0
200	39144	420	-58.0	0
175	41990	384	-58.2	0
150	45079	344	-58.2	0
125	48737	322	-59.3	0
100	53406	299	-60.6	0
80	57956	279	-60.4	0
70	60669	266	-59.8	0
60	63839	269	-58.8	0
50	67608	282	-57.1	0
40	72251	289	-54.5	0
30	78323	338	-51.6	0
25	82149	335	-50.3	0
20	86959	381	-47.5	0
15	93202	443	-44.5	0
10	102175	486	-39.3	0

Table 175 Mean Upper-Air Height and Temperature Data for Point Mugu, California: May

NO. OBSERVATIONS -- SURFACE = 416 TOP = 128

PRES-SURE LEVEL (MBS)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCFNT)
SFC	13 0	15.4 3.6	75
1000	430 72	14.4 3.4	75
950	1854 75	13.7 4.8	75
900	3343 79	13.7 5.6	55
850	4921 92	13.0 5.6	35
800	6585 108	10.7 5.2	25
750	8343 131	7.9 4.7	25
700	10194 154	4.6 4.4	25
650	12159 177	1.0 4.2	15
600	14249 200	-3.1 4.1	15
550	16490 223	-7.6 3.9	15
500	18901 256	-12.7 3.7	15
450	21516 292	-18.5 3.6	15
400	24354 325	-25.1 3.6	15
350	27470 354	-32.7 3.5	15
300	30968 394	-41.0 3.2	0
250	34954 430	-49.8 3.1	0
200	39642 423	-57.6 3.7	0
175	42388 410	-59.3 4.3	0
150	45538 374	-59.9 4.1	0
125	49265 348	-60.6 3.6	0
100	53789 302	-61.6 3.6	0
80	58323 285	-61.1 3.1	0
70	61040 282	-60.0 2.9	0
60	64206 282	-58.6 2.9	0
50	67972 292	-56.5 3.1	0
40	72638 315	-53.7 3.2	0
30	78698 341	-50.7 2.8	0
25	82569 351	-48.9 2.8	0
20	87411 390	-46.1 3.0	0
15	93701 404	-43.0 2.5	0
10	102740 459	-37.0 2.4	0

Table 176. Mean Upper-Air Height and Temperature Data for Point Mugu, California: June

NO. OBSERVATIONS -- SURFACE = 359 TOP = 119

PRESSURE LEVEL (MHS)	HIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	16.2 2.8	85
1000	384 66	15.1 2.4	85
950	1821 72	15.3 4.4	75
900	3320 75	17.0 5.8	45
850	4921 89	17.3 5.6	25
800	6608 104	15.2 4.8	25
750	8396 131	12.1 4.3	25
700	10272 151	8.7 3.9	25
650	12270 171	4.9 3.6	25
600	14393 190	.8 3.5	25
550	16663 210	-3.6 3.4	25
500	19114 236	-8.8 3.4	25
450	21768 266	-14.7 3.2	15
400	24652 289	-21.3 3.1	15
350	27802 325	-29.3 3.2	15
300	31358 351	-37.6 2.9	15
250	35400 384	-46.7 2.9	0
200	40148 407	-55.5 3.1	0
175	42917 404	-58.8 3.4	0
150	46063 384	-61.5 3.7	0
125	49747 348	-63.5 3.8	0
100	54226 302	-64.4 3.6	0
80	58717 266	-62.2 3.0	0
70	61430 253	-60.2 2.5	0
60	64603 253	-58.1 2.2	0
50	68389 256	-55.5 2.2	0
40	73077 276	-52.6 2.0	0
30	79206 312	-49.1 2.6	0
25	83094 302	-47.5 2.1	0
20	87966 331	-44.6 2.4	0
15	94304 351	-41.4 2.1	0
10	103438 381	-36.2 2.3	0

Table 177. Mean Upper-Air Height and Temperature Data for Point Mugu, California: July

NO. OBSERVATIONS -- SURFACE = 370 TOP = 122

PRESSURE LEVEL (MB)	MEAN HEIGHT (FEET)	S.D.	MEAN TEMPERATURE (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	17.3	2.8	85
1000	397	62	16.3	2.4	85
950	1847	64	19.3	4.2	55
900	3369	69	22.3	3.5	35
850	4997	75	21.5	2.9	25
800	6709	85	14.8	2.5	25
750	8517	95	15.3	2.2	25
700	10413	102	11.3	2.0	35
650	12431	112	7.1	2.0	35
600	14570	114	2.6	2.3	35
550	16854	131	-2.2	2.3	35
500	19318	141	-7.2	2.3	25
450	21991	164	-12.7	2.5	25
400	24895	180	-18.8	2.4	15
350	28100	194	-26.0	2.4	15
300	31699	220	-34.2	2.5	15
250	35804	249	-43.3	2.2	0
200	40623	272	-53.3	2.0	0
175	43409	274	-58.6	2.3	0
150	46542	272	-63.9	2.5	0
125	50174	260	-67.6	3.1	0
100	54567	262	-67.3	2.7	0
80	59012	276	-63.5	2.4	0
70	61709	285	-61.1	2.3	0
60	64872	302	-58.5	2.2	0
50	68645	315	-55.6	2.1	0
40	73323	338	-53.1	2.0	0
30	79423	364	-49.9	2.2	0
25	83314	377	-48.0	2.2	0
20	88166	420	-45.5	2.4	0
15	94459	469	-42.7	2.4	0
10	103530	545	-37.7	2.9	0

Table 178. Mean Upper-Air Height and Temperature Data for Point Mugu, California: August

NO. OBSERVATIONS -- SURFACE = 423 TOP = 154

PRESSURE LEVFL (MB)	HEIGHT MEAN (FEET)	S.D. (FEET)	TEMPERATURE MEAN (DEG. CELSIUS)	S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	18.4	2.8	85
1000	397	66	17.5	2.1	85
950	1854	69	19.4	4.7	65
900	3376	66	21.5	4.9	35
850	5000	72	20.8	4.1	25
800	6709	85	18.2	3.3	25
750	8507	93	14.7	2.8	25
700	10407	104	10.9	2.4	25
650	12421	121	6.8	2.2	25
600	14560	128	2.4	2.2	25
550	16844	144	-2.2	2.1	25
500	19304	151	-7.3	2.1	25
450	21978	164	-12.9	2.1	25
400	24882	180	-19.1	2.2	20
350	28084	187	-26.3	2.4	15
300	31680	213	-34.8	2.5	15
250	35771	244	-43.9	2.6	0
200	40584	279	-53.4	2.2	0
175	43373	282	-58.3	2.2	0
150	46512	276	-63.1	2.5	0
125	50154	259	-66.7	3.2	0
100	54570	233	-66.8	3.4	0
80	59026	233	-63.2	2.9	0
70	61729	249	-60.7	2.4	0
60	64905	256	-58.0	2.2	0
50	68698	276	-55.5	2.1	0
40	73389	302	-52.8	2.0	0
30	79518	338	-49.7	2.2	0
25	83422	364	-48.0	2.1	0
20	88264	397	-45.8	2.4	0
15	94577	456	-42.8	2.5	0
10	103576	564	-38.5	2.6	0

Table 179. Mean Upper-Air Height and Temperature Data for Point Mugu, California: September

NO. OBSERVATIONS -- SURFACE = 358 TOP = 132

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	18.0 3.8	80
1000	358 69	17.7 3.0	75
950	1811 79	19.6 4.9	55
900	3337 74	20.7 4.8	35
850	4951 89	19.2 4.1	25
800	6647 105	16.2 3.5	25
750	8438 121	12.6 3.0	25
700	10322 131	8.9 2.8	35
650	12323 148	5.2 2.7	25
600	14449 154	1.1 2.4	25
550	16726 174	-3.4 2.5	25
500	19173 184	-8.4 2.3	15
450	21831 203	-14.2 2.2	15
400	24718 217	-20.5 2.2	15
350	27894 220	-29.1 2.4	15
300	31460 240	-38.3 2.5	15
250	35531 256	-44.7 2.7	0
200	40331 269	-53.6 2.8	0
175	43117 272	-57.9 2.7	0
150	46266 265	-62.3 2.9	0
125	49921 255	-66.0 3.1	0
100	54344 240	-66.9 3.1	0
80	58780 236	-64.5 2.7	0
70	61463 243	-62.1 2.6	0
60	64610 254	-59.6 2.6	0
50	58373 274	-57.3 2.3	0
40	73022 305	-54.2 2.4	0
30	79098 344	-51.1 2.4	0
25	82982 381	-49.3 2.4	0
20	87812 417	-47.2 2.5	0
15	94098 482	-44.7 2.6	0
10	103022 551	-40.8 2.9	0

Table 180. Mean Upper-Air Height and Temperature Data for Point Mugu, California: October

NO. OBSERVATIONS -- SURFACE = 398 TOP = 142

PRESSURE LEVEL (MB)	HEIGHT MEAN S.D. (FEET)	TEMPERATURE MEAN S.D. (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13 0	16.8 3.9	75
1000	430 75	17.1 3.9	75
950	1877 82	18.0 5.3	60
900	3336 92	17.9 5.2	35
850	4987 105	16.0 4.8	25
800	6663 121	13.2 4.4	25
750	8435 134	9.9 4.2	25
700	10299 154	6.5 4.4	25
650	12283 171	2.9 3.7	25
600	14393 190	-1.3 3.8	25
550	16647 213	-5.9 3.7	25
500	19075 236	-11.1 3.5	25
450	21709 253	-17.0 3.1	15
400	24570 279	-23.4 2.9	15
350	27733 299	-31.0 2.8	15
300	31257 328	-39.2 2.4	15
250	35279 348	-47.6 2.8	0
200	40023 341	-55.7 3.7	0
175	42792 338	-59.3 3.6	0
150	45935 327	-62.6 3.4	0
125	49600 295	-65.5 3.3	0
100	54026 264	-67.6 3.5	0
80	58442 249	-66.0 3.0	0
70	61106 246	-64.2 2.6	0
60	64219 253	-61.9 2.3	0
50	67940 262	-59.3 2.3	0
40	72552 289	-56.4 2.3	0
30	78586 328	-53.0 2.6	0
25	82444 367	-51.2 2.7	0
20	87221 417	-49.3 3.1	0
15	93406 459	-47.3 3.4	0
10	102221 548	-43.9 3.4	0

Table 181. Mean Upper-Air Height and Temperature Data for Point Mugu, California: November

NO. OBSERVATIONS -- SURFACE = 326 TOP = 114

PRESSURE LEVEL (MB)	MEAN HEIGHT (FEET)	MEAN TEMPERATURE (DEG. CELSIUS)	MEDIAN REL.HUM. (PERCENT)
SFC	13	15.2	75
1000	492	16.1	65
950	1926	15.8	45
900	3425	13.9	35
850	4997	11.5	35
800	6650	8.8	25
750	8396	6.1	25
700	10236	3.0	25
650	12192	-0.5	25
600	14272	-4.6	25
550	16496	-9.0	25
500	18888	-14.1	25
450	21490	-19.8	25
400	24318	-26.2	25
350	27385	-33.7	25
300	30373	-41.7	0
250	34856	-49.8	0
200	39567	-57.0	0
175	42326	-59.8	0
150	45469	-62.0	0
125	49147	-64.5	0
100	53596	-66.2	0
80	58041	-65.8	0
70	60709	-64.4	0
60	63809	-63.0	0
50	67510	-61.1	0
40	72077	-59.1	0
30	78031	-56.1	0
25	81814	-54.4	0
20	86516	-52.0	0
15	92621	-50.3	0
10	101329	-46.9	0

Table 182. Mean Upper-Air Height and Temperature Data for Point Mugu, California: December

NO. OBSERVATIONS -- SURFACE = 447 TOP = 142

PRESSURE LEVEL (MBS)	HEIGHT MEAN (FEET)	S.D.	TEMPERATURE MEAN (DEG. CELSIUS)	S.D.	MEDIAN REL.HUM. (PERCENT)
SFC	13	0	12.2	4.9	65
1000	499	128	13.2	3.8	55
950	1913	135	12.3	4.7	30
900	3392	144	10.2	5.0	35
850	4944	161	8.1	5.3	30
800	6578	180	5.7	5.5	25
750	8307	210	3.2	5.2	25
700	10128	233	-0.3	5.2	25
650	12067	264	-3.2	5.1	25
600	14124	302	-7.1	4.9	25
550	16335	335	-11.6	4.6	25
500	18714	371	-16.5	4.3	25
450	21296	410	-21.9	4.0	25
400	24101	444	-28.1	3.9	25
350	27185	494	-35.4	3.7	25
300	30646	524	-43.2	3.3	0
250	34596	548	-51.4	3.6	0
200	39268	531	-57.8	5.0	0
175	42024	504	-59.2	5.2	0
150	45180	476	-60.8	4.7	0
125	48875	433	-63.1	4.6	0
100	53353	377	-65.2	4.8	0
80	57802	328	-65.2	4.7	0
70	60469	322	-64.4	4.0	0
60	63566	315	-63.2	3.4	0
50	67254	315	-61.7	3.0	0
40	71804	331	-59.8	2.8	0
30	77720	367	-57.2	3.2	0
25	81457	351	-56.1	3.2	0
20	86125	407	-54.3	3.8	0
15	92159	436	-52.4	4.1	0
10	100314	525	-49.0	4.5	0

UPPER-AIR DATA ABOVE 100,000 FEET

Descriptions of the wind and temperature fields above 100,000 feet (31 kilometers) as measured by the payloads of meteorological rockets fired from Point Mugu during the eight years 1961 through 1968 are presented in this section.

The payloads, carried by rockets of the ARCAS and HASP type, routinely reach altitudes of 200,000 feet (61 kilometers) or higher. From these peak altitudes, temperature and wind sensors descend and provide data to suitably equipped ground stations. Descriptions of the rockets, their various payloads, the Meteorological Rocket Network (MRN) operations (of which the Point Mugu firings are an integral part), and the data reduction methods may be found in reference 13).

MEAN MONTHLY WIND AND TEMPERATURE TABLES

Listings of mean wind components and temperature data for altitudes from 32 kilometers (98,000 feet) to as high as data are available are presented in tables 183 through 194. These tables have been extracted from the monthly publications of reference 14. Derived data pressure, density, and speed of sound are also included in the tables, as are values of the standard deviation and the number of observations for each item at each level. A preliminary summary of data obtained from 35 to 90 kilometers using the falling sphere sensor of the Viper-Dart firings at Point Mugu, is presented in appendix B.

Table 183. Wind Components and Thermodynamic Data, Point Mugu, California: January

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL

THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC

TEMPERATURE IS IN DEGREES CELSIUS

DENSITY IS IN GRAMS PER CU METER

THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN

AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

HT	M	-N+S	-E+W	S	N	M	TEMP	S	N	PRESSURE			M	DENSITY	S	N	SPEED OF SOUND		
										M	S	N					M	S	N
69	28	.0	.0	79	.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	25	.0	.0	90	.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
67	15	6.0	111	10.3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	14	9.5	107	10.9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	11	26.8	109	16.2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	13	23.4	152	19.4	12	-15.2	2.4	2	-12.6	.000	2	.176	.002	2	.122	.002	2	.15	2
63	16	22.4	199	22.7	14	-14.9	1.4	2	-14.4	.001	2	.195	.002	2	.322	.002	2	.9	2
62	14	20.2	97	27.2	17	-7.4	8.5	13	-168	.009	10	.222	.008	10	.327	.012	15	.5.5	10
61	17	18.9	92	36.2	22	-7.6	8.9	15	-191	.011	15	.252	.012	15	.327	.013	19	.5.3	15
60	18	16.6	93	33.3	25	-8.6	8.5	19	-218	.012	19	.288	.013	19	.326	.013	19	.5.3	19
59	15	17.1	82	37.1	34	-8.2	8.2	20	-247	.012	20	.327	.014	20	.326	.014	20	.5.1	20
58	14	17.7	75	36.0	38	-8.7	8.1	21	-280	.012	21	.371	.014	21	.326	.014	21	.4.9	21
57	11	20.2	65	37.1	48	-8.8	7.4	23	-317	.014	23	.426	.017	23	.326	.017	23	.4.6	23
56	13	19.1	65	35.3	55	-9.4	5.4	24	-358	.014	24	.476	.022	24	.326	.022	24	.3.9	24
55	11	19.5	61	35.4	63	-9.7	5.8	25	-407	.018	25	.541	.027	25	.325	.027	25	.3.6	25
54	11	20.2	61	35.6	67	-8.1	4.7	27	-465	.025	27	.613	.034	27	.326	.034	27	.2.8	27
53	12	20.0	61	37.4	72	-7.5	3.9	31	-525	.032	31	.701	.065	31	.327	.065	31	.2.9	31
52	12	19.2	60	37.8	78	-5.7	4.2	32	-599	.036	32	.791	.064	32	.326	.064	32	.2.9	32
51	12	19.8	56	39.2	82	-4.3	4.2	33	-680	.039	33	.891	.063	33	.329	.063	33	2.8	33
50	13	20.0	55	38.6	83	-3.6	4.3	33	-770	.040	33	1.003	.063	33	.328	.063	33	2.7	33
49	12	20.0	53	38.1	85	-2.6	4.8	34	-868	.040	33	1.128	.056	33	.330	.056	33	2.8	33
48	11	18.6	49	37.7	86	-2.5	5.2	34	-973	.038	33	1.269	.052	33	.330	.052	33	2.8	33
47	10	17.8	47	37.8	88	-2.4	6.1	37	1.111	.045	35	1.440	.066	35	.350	.066	35	3.5	35
46	9	17.5	45	36.1	89	-4.2	6.8	38	1.259	.051	36	1.644	.080	36	.328	.080	36	3.7	36
45	9	17.0	42	37.4	90	-6.2	6.7	38	1.429	.057	36	1.881	.089	36	.327	.089	36	3.6	36
44	7	15.7	39	37.1	91	-8.6	7.5	38	1.627	.065	36	2.162	.108	36	.326	.108	36	4.0	36
43	7	15.5	37	36.0	90	-11.0	7.7	39	1.853	.073	37	2.487	.112	37	.324	.112	37	5.1	37
42	6	15.7	33	34.7	90	-14.2	7.7	39	2.114	.082	37	2.870	.132	37	.322	.132	37	4.0	37
41	5	15.7	28	35.5	90	-17.5	7.7	39	2.416	.097	37	3.329	.167	37	.320	.167	37	4.2	37
40	3	15.9	24	36.1	89	-4.2	6.8	38	1.259	.051	36	1.644	.080	36	.328	.080	36	3.7	36
39	2	15.0	21	30.2	88	-23.9	8.0	39	3.171	.127	37	4.868	.201	37	.318	.201	37	4.7	37
38	2	14.5	18	28.0	88	-27.3	8.2	40	3.635	.146	37	5.194	.231	37	.316	.231	37	4.8	37
37	2	14.2	16	26.0	88	-30.9	7.1	42	4.174	.165	37	6.043	.273	37	.314	.273	37	5.1	37
36	2	13.9	13	23.9	87	-34.3	6.3	42	4.787	.165	37	7.041	.285	37	.312	.285	37	4.0	37
35	2	13.4	12	22.0	87	-37.4	5.7	42	5.525	.184	37	8.241	.287	37	.307	.287	37	3.4	37
34	2	12.7	10	26.5	86	-39.1	5.9	41	6.398	.212	36	9.617	.364	36	.306	.364	36	3.1	36
33	1	11.9	8	19.2	86	-41.6	5.4	42	7.408	.233	36	11.266	.408	36	.304	.408	36	4.8	36
32	-1	10.9	7	16.2	85	-43.3	5.1	42	8.593	.252	37	13.157	.492	37	.304	.492	37	3.1	37
31	-1	9.8	5	17.7	85	-45.6	5.0	43	9.974	.278	37	15.395	.559	37	.302	.559	37	3.3	37
30	-1	8.8	4	17.3	84	-47.5	4.7	43	11.610	.349	37	18.074	.738	37	3.2	.738	37	3.2	37

Table 18-1 Wind Components and Thermodynamic Data, Point Mugu, California: February

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC

TEMPERATURE IS IN DEGREES CELSIUS

DENSITY IS IN GRAMS PER CU METER

THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

1961 THROUGH 1968

HT	W			-N+S			-E+N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND			
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	W	N
65	13	.7	64	.0	1	0	-22.1	0	1	.104	0	1	.163	0	1	.114	0	1	.114	0	.1	.1
64	11	3.0	75	1.5	3	1	-12.6	6.1	4	.125	.004	4	.169	.004	4	.264	.0	7	.264	.0	.7	.4
63	8	5.5	75	17.8	6	5.6	-13.9	5.6	6	.160	.009	6	.184	.011	6	.323	.3	5	.323	.3	.5	.5
62	10	12.5	66	16.4	13	12.4	-12.4	5.5	3	.160	.010	8	.214	.012	8	.324	.4	4	.324	.4	.4	.4
61	9	14.5	63	19.0	15	-12.8	7.5	15	.156	.013	15	.249	.014	15	.322	.4	5	.322	.4	.5	.5	
60	7	15.8	63	22.8	22	-10.5	9.1	22	.211	.014	22	.281	.014	22	.325	.5	6	.325	.5	.6	.22	
59	6	13.9	65	24.9	28	-9.4	7.7	23	.240	.014	28	.318	.013	28	.326	.4	8	.326	.4	.8	.28	
58	7	13.1	64	25.6	33	-9.0	7.4	30	.273	.014	30	.361	.014	30	.326	.4	6	.326	.4	.6	.30	
55	7	13.0	60	24.5	44	-8.5	8.1	32	.310	.015	31	.409	.016	31	.326	.4	4	.326	.4	.4	.31	
57	7	13.0	59	24.2	54	-8.3	7.7	34	.353	.016	32	.466	.018	32	.326	.4	3	.326	.4	.3	.32	
56	9	14.0	59	24.2	54	-8.3	7.4	34	.353	.016	32	.528	.023	32	.327	.4	3	.327	.4	.3	.315	
56	9	13.1	54	27.0	60	-7.1	9.1	38	.402	.018	36	.528	.023	36	.327	.4	2	.327	.4	.2	.315	
54	8	12.5	57	30.2	68	-7.2	7.5	39	.457	.021	36	.601	.021	36	.327	.4	3	.327	.4	.3	.315	
53	4	12.4	57	30.1	72	-7.5	6.2	39	.520	.025	36	.684	.033	36	.327	.4	3	.327	.4	.3	.315	
52	8	14.2	56	35.6	75	-6.6	5.8	41	.588	.029	36	.772	.039	36	.327	.4	3	.327	.4	.3	.313	
51	7	14.4	55	26.6	76	-5.6	6.3	43	.666	.032	39	.871	.044	39	.327	.4	3	.327	.4	.3	.313	
50	7	14.7	53	29.5	79	-5.7	5.2	44	.750	.026	40	.971	.048	40	.327	.4	3	.327	.4	.3	.313	
49	6	14.1	52	25.8	82	-5.6	5.4	45	.852	.027	41	1.125	.053	41	.327	.4	3	.327	.4	.3	.313	
48	6	13.3	51	31.2	82	-6.2	5.5	46	.979	.045	42	1.282	.055	42	.327	.4	2	.327	.4	.2	.313	
47	5	12.5	50	30.9	83	-6.4	6.2	47	1.115	.056	43	1.442	.065	43	.327	.4	3	.327	.4	.3	.313	
46	4	13.2	47	30.9	86	-7.6	6.8	47	1.269	.061	43	1.671	.072	43	.327	.4	3	.327	.4	.3	.313	
45	3	13.1	45	31.1	87	-9.7	6.4	48	1.448	.069	44	1.922	.081	44	.327	.4	3	.327	.4	.3	.313	
44	2	12.0	42	19.2	89	-11.3	6.1	48	1.650	.079	44	2.201	.096	44	.327	.4	3	.327	.4	.3	.313	
43	1	11.3	39	28.7	84	-13.7	6.0	48	1.876	.081	44	2.545	.101	44	.327	.4	3	.327	.4	.3	.313	
42	0	10.4	35	21.6	89	-15.7	7.3	51	2.148	.097	46	2.923	.125	46	.327	.4	3	.327	.4	.3	.313	
41	-1	9.6	33	27.8	88	-18.0	6.8	52	2.450	.108	46	3.361	.131	46	.327	.4	3	.327	.4	.3	.313	
40	-2	8.9	30	31.9	89	-20.9	6.3	52	2.803	.115	46	3.882	.145	46	.327	.4	3	.327	.4	.3	.313	
39	-2	8.7	27	26.3	89	-21.5	6.3	52	3.212	.128	46	4.487	.165	46	.327	.4	3	.327	.4	.3	.313	
38	-1	8.5	25	25.4	89	-26.7	6.2	52	3.684	.136	46	5.207	.170	46	.327	.4	3	.327	.4	.3	.313	
37	-1	7.9	21	24.4	89	-29.5	6.1	53	4.223	.162	47	6.043	.197	47	.327	.4	3	.327	.4	.3	.313	
36	-1	7.3	20	23.1	85	-31.6	5.8	53	4.856	.205	47	7.021	.215	47	.327	.4	3	.327	.4	.3	.313	
35	-10	6.5	18	21.4	89	-33.2	5.7	53	5.604	.198	47	8.148	.239	47	.327	.4	3	.327	.4	.3	.313	
34	-10	5.2	15	20.2	94	-35.5	5.5	52	6.442	.206	46	9.474	.252	46	.327	.4	3	.327	.4	.3	.313	
33	-10	5.0	15	18.7	88	-37.0	5.5	52	7.461	.215	46	11.003	.290	46	.327	.4	3	.327	.4	.3	.313	
32	-11	4.5	9	17.4	88	-40.1	5.1	51	8.638	.257	45	12.916	.355	45	.327	.4	3	.327	.4	.3	.313	
31	-11	4.6	8	16.5	87	-42.4	5.1	51	10.027	.337	45	15.141	.549	45	.327	.4	3	.327	.4	.3	.313	
30	-11	4.7	7	15.3	85	-45.5	5.5	52	11.656	.427	44	17.843	.714	44	.327	.4	3	.327	.4	.3	.313	

Table 185. Wind Components and Thermodynamic Data, Point Mugu, California: March

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER

THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

HT	-N+S			-E+W			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
64	0	0	0	-12.5	0	1	-1.1	0	1	.176	0	1	322	0	1	322	0	1
63	3	0	57	-12.6	0	1	-1.49	0	1	.199	0	1	324	0	1	324	0	1
62	3	3.3	68	10.1	5	4	-1.73	.005	4	.228	.007	4	327	2.4	4	327	2.4	4
61	1	6.2	66	19.2	8	8.0	-4.5	9	10.6	.006	9	.260	.007	9	326	2.7	9	
60	5	6.4	58	23.5	12	-7.5	5.2	14	-2.26	.007	14	.296	.010	14	327	3.2	14	
59	4	9.6	54	20.3	19	-7.8	5.7	17	-2.57	.009	17	.338	.012	17	327	3.4	17	
58	4	10.3	57	19.0	24	-7.8	5.3	24	-1.92	.011	24	.343	.014	24	327	3.4	24	
57	5	10.2	44	21.6	37	-7.7	6.0	25	-2.32	.011	25	.345	.017	25	327	3.7	25	
56	4	9.3	41	23.5	46	-7.7	5.0	31	-3.77	.017	31	.494	.023	31	327	3.9	31	
55	4	9.0	42	21.9	59	-6.9	5.4	34	-4.29	.020	34	.562	.026	34	327	3.9	34	
54	5	8.5	42	20.3	70	-6.6	4.8	34	-4.86	.021	34	.634	.027	34	327	3.9	34	
53	5	8.1	42	19.5	78	-6.0	4.2	37	-5.55	.022	37	.724	.027	37	326	2.4	37	
52	5	8.5	41	18.6	86	-4.8	3.7	39	-6.31	.024	39	.820	.030	39	326	2.2	39	
51	6	8.8	41	18.3	89	-4.5	3.5	39	-7.15	.028	39	.926	.035	39	329	2.1	39	
50	6	8.5	41	18.2	89	-4.7	3.9	41	-8.11	.032	41	1.053	.042	41	329	2.1	41	
49	6	8.2	38	18.2	91	-3.9	6.7	42	-9.21	.037	41	1.197	.050	41	329	2.4	41	
48	6	7.7	37	17.6	93	-4.4	6.1	43	-10.44	.039	42	1.359	.052	42	328	2.4	42	
47	5	7.7	36	17.6	93	-5.0	5.5	46	-1.04	.046	45	1.544	.063	45	328	2.4	45	
46	4	7.9	35	18.4	93	-6.8	5.4	46	-1.345	.051	45	1.765	.072	45	327	2.9	45	
45	3	8.1	34	19.4	94	-9.5	5.6	46	-1.529	.058	45	2.025	.094	45	326	3.2	45	
44	2	8.1	33	19.9	95	-10.6	5.7	47	-1.737	.068	46	2.317	.109	46	325	3.4	46	
43	1	7.7	32	20.9	95	-12.4	5.7	48	-1.974	.075	47	2.650	.123	47	324	3.5	47	
42	0	7.6	31	22.0	96	-14.7	5.2	48	-2.29	.086	47	3.045	.136	47	322	3.7	47	
41	-1	7.2	31	22.5	96	-17.8	5.2	47	-2.569	.097	46	3.513	.142	46	326	3.1	46	
40	-2	7.2	31	22.7	96	-20.2	5.0	48	-2.938	.112	47	4.052	.157	47	319	3.2	47	
39	-1	7.6	29	23.8	97	-22.8	4.9	48	-3.365	.127	47	4.691	.179	47	317	3.1	47	
38	-1	8.2	27	23.3	97	-24.9	4.7	48	-3.856	.147	47	5.422	.205	47	316	2.9	47	
37	0	8.2	25	22.7	97	-26.7	4.1	48	-4.432	.165	47	6.271	.212	47	315	2.6	47	
36	2	7.8	22	22.0	97	-28.7	4.4	48	-5.080	.173	47	7.246	.223	47	313	2.4	47	
35	3	7.3	20	21.0	97	-30.2	4.0	48	-5.864	.192	47	8.389	.247	47	312	2.4	47	
34	3	7.0	17	20.4	97	-32.0	4.6	49	-6.721	.222	48	9.750	.264	48	311	3.1	48	
33	3	6.9	15	19.1	97	-35.0	4.9	48	-7.739	.228	46	11.335	.246	46	309	3.2	46	
32	2	7.4	12	17.6	97	-37.5	4.8	48	-8.930	.244	46	13.215	.278	46	308	3.2	46	
31	1	6.4	11	16.0	97	-39.1	4.6	47	-10.345	.270	45	15.411	.324	45	307	3.0	45	
30	1	5.6	10	15.8	97	-42.2	4.8	46	-11.978	.300	44	18.081	.363	44	305	3.2	44	

Table 186 Wind Components and Thermodynamic Data, Point Mugu, California: April

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC

TEMPERATURE IS IN DEGREES CELSIUS

DENSITY IS IN GRAMS PER CU METER

THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

1961 THROUGH 1968

HT	-N+S			-E+N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
72	-7.6	1.0	4.4	-0.0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
71	-6.4	-0.2	3.7	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
70	-5.3	-0.0	3.0	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
69	-4.1	-0.0	2.4	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	-3.0	-0.0	1.7	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
67	-2.2	-0.0	1.4	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
66	-1.7	-0.0	1.5	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
65	-1.2	-0.0	1.6	-0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	-1.3	4.1	1.0	7.2	2	2	-16.3	4.9	2	125	0.06	2	-170	.004	2	320	3.2	2
63	-2	-0.3	9	2.3	2	2	-14.7	4.7	7	1152	.010	7	.205	.011	7	322	2.9	7
62	0	4.9	8	3.8	2	2	-12.1	6.9	15	1175	.009	15	.235	.011	15	324	4.3	15
61	5	9.3	14	15.9	3	3	-10.8	5.0	18	1201	.010	18	.267	.012	18	325	3.2	18
60	8	4.3	-3	19.4	5	5	-10.0	4.2	23	1228	.012	23	.303	.014	23	325	2.7	23
59	4	6.0	2	19.1	11	11	-9.9	4.7	25	1261	.013	25	.345	.015	25	326	2.9	25
58	1	10.6	5	18.0	25	25	-8.0	4.5	26	1296	.014	26	.390	.017	26	326	2.8	26
57	1	7.8	8	18.4	37	37	-7.5	3.8	27	1337	.015	27	.442	.019	27	327	2.3	27
56	0	6.7	11	17.3	44	44	-6.8	3.9	27	1382	.016	27	.500	.021	27	327	2.4	27
55	1	5.5	14	17.8	52	52	-5.6	3.9	29	1436	.020	29	.569	.025	29	328	2.3	29
54	2	5.1	17	16.7	61	61	-5.1	3.0	32	1498	.025	32	.648	.031	32	328	1.7	32
53	3	5.6	17	16.4	73	73	-5.2	3.1	33	1564	.026	33	.734	.034	33	328	1.9	33
52	4	6.0	18	15.8	85	85	-4.0	3.1	34	1640	.029	36	.830	.036	36	329	2.1	36
51	6	5.0	19	15.8	91	91	-4.3	3.1	37	1727	.032	37	.943	.039	37	329	1.9	37
50	6	5.7	19	15.4	93	93	-4.2	3.2	37	1826	.038	37	1.071	.045	37	329	2.0	37
49	6	5.9	14	17.8	52	52	-4.6	3.9	39	1936	.044	39	1.212	.050	39	329	2.3	39
48	6	6.0	18	13.2	96	96	-3.8	3.5	39	1962	.050	39	1.376	.057	39	329	2.1	39
47	5	5.5	19	12.7	97	97	-3.6	3.1	39	2026	.053	39	1.559	.060	39	329	1.9	39
46	4	6.4	18	12.1	101	101	-3.0	3.0	40	2070	.060	40	1.781	.066	40	328	2.3	40
45	4	7.0	18	11.8	97	97	-6.5	4.1	40	1.556	.066	40	2.034	.072	40	327	2.6	40
44	3	6.9	19	11.7	97	97	-8.2	4.2	40	1.766	.070	40	2.324	.081	40	326	2.7	40
43	6	6.4	19	14.4	94	94	-4.1	3.5	39	1936	.044	39	1.212	.050	39	325	2.6	39
42	6	6.0	20	12.2	99	99	-10.4	4.9	40	2010	.077	40	2.669	.089	40	323	3.1	40
41	-1	5.1	21	12.7	101	101	-16.1	5.0	40	2086	.085	40	3.066	.095	40	321	3.2	40
40	-1	4.9	22	13.1	101	101	-18.8	4.9	40	2.608	.091	40	3.537	.105	40	320	3.2	40
39	-10	5.0	22	12.8	101	101	-21.4	4.4	40	3.406	.112	40	4.717	.130	40	318	2.8	40
38	-10	5.4	22	12.0	102	102	-24.0	4.1	40	3.877	.112	40	5.457	.155	40	316	2.9	40
37	-12	5.3	21	10.4	102	102	-26.0	4.2	40	4.473	.131	40	6.215	.196	40	315	2.6	40
36	-12	5.8	20	12.2	102	102	-28.3	4.9	42	5.140	.146	42	7.334	.205	40	313	2.7	40
35	-1	5.1	21	12.7	101	101	-30.6	4.4	42	5.913	.166	42	8.513	.239	40	312	2.6	40
34	-1	4.9	22	13.1	101	101	-32.6	4.6	42	6.811	.193	42	9.882	.273	40	311	2.4	40
33	-3	4.2	13	8.0	102	102	-34.7	3.9	42	7.865	.213	40	11.473	.327	40	309	2.5	40
32	-2	4.1	11	7.9	102	102	-36.3	4.1	42	9.053	.236	40	13.319	.372	40	309	2.7	40
31	-2	4.0	10	7.4	101	101	-39.0	3.3	43	10.470	.258	41	15.585	.421	41	307	2.6	41
30	2	3.7	8	7.3	100	100	-41.5	3.8	43	12.161	.295	41	18.264	.517	41	305	2.5	41

Table 187. Wind Components and Thermodynamic Data, Point Mugu, California: May

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

1961 THROUGH 1968

HT	-N+S			-E+N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	M	S	N	
69	3	0	-35	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	-3	7.2	-30	3.4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
67	-6	11.6	-31	3.7	3	-12.5	-1.1	1	0.99	0.00	1	0.135	0.00	1	323	0.1	1	1
66	-1	9.0	-27	4.3	3	-11.2	0.0	1	0.115	0.00	1	0.155	0.00	1	324	.1	1	1
65	1	5.5	-28	1.5	6	-10.3	-0.4	2	0.129	0.001	2	0.172	0.002	2	325	.1	2	2
64	2	3.2	-27	15.9	6	-13.6	5.7	4	0.164	0.006	4	0.195	0.010	4	323	3.2	4	4
63	4	4.1	-28	14.2	6	-8.5	7.4	7	0.169	0.008	7	0.226	0.011	7	326	4.2	7	7
62	4	6.9	-26	12.2	8	-9.0	5.3	12	0.191	0.010	12	0.254	0.012	12	326	3.0	12	12
61	1	7.3	-22	13.3	10	-8.0	4.9	16	0.218	0.016	16	0.287	0.012	16	326	2.9	16	16
60	-9	7.2	-31	14.3	17	-7.3	5.2	28	0.247	0.015	28	0.325	0.018	28	327	3.1	28	28
59	1	5.7	-39	11.4	29	-7.0	5.1	31	0.283	0.027	31	0.372	0.033	31	327	3.1	31	31
58	3	5.5	-30	13.9	39	-6.8	4.9	36	0.321	0.037	36	0.420	0.047	36	327	3.0	36	36
57	3	5.1	-28	14.5	48	-5.6	4.5	41	0.366	0.044	41	0.477	0.057	41	328	2.7	41	41
56	3	5.7	-26	12.5	64	-5.0	4.5	45	0.414	0.052	45	0.539	0.067	45	328	2.6	45	45
55	3	5.1	-24	11.2	84	-3.7	4.6	48	0.471	0.058	48	0.610	0.076	48	329	2.7	48	48
54	3	5.3	-22	10.8	92	-2.8	4.1	49	0.534	0.065	49	0.690	0.085	49	329	2.4	49	49
53	4	4.9	-21	10.6	100	-2.2	4.0	51	0.605	0.070	51	0.780	0.092	51	330	2.4	51	51
52	5	5.3	-20	11.0	106	-1.5	3.7	56	0.683	0.072	56	0.877	0.096	56	330	2.3	56	56
51	5	5.3	-18	10.9	110	-1.0	3.6	57	0.772	0.075	57	0.990	0.101	57	331	2.2	57	57
50	5	5.5	-17	10.5	113	-0.9	3.0	58	0.874	0.076	58	1.120	0.102	58	331	1.8	58	58
49	5	5.5	-16	10.4	117	-0.8	2.6	58	0.989	0.078	58	1.268	0.104	58	331	1.8	58	58
48	5	4.6	-15	10.2	119	-0.6	4.9	60	1.121	0.079	59	1.436	0.106	59	331	2.8	59	59
47	4	4.4	-13	10.2	122	-1.2	4.0	60	1.268	0.078	59	1.628	0.104	59	330	2.3	59	59
46	4	4.5	-13	9.6	123	-1.8	3.6	60	1.436	0.076	59	1.803	0.100	59	330	1.9	59	59
45	3	4.6	-12	9.2	123	-3.2	3.4	60	1.626	0.070	59	2.103	0.090	59	329	2.1	59	59
44	2	4.4	-11	8.9	123	-5.0	3.6	61	1.837	0.063	60	2.391	0.077	60	328	2.2	60	60
43	1	4.1	-10	9.3	123	-6.7	3.6	62	2.081	0.062	61	2.725	0.070	61	327	2.2	61	61
42	0	3.8	-8	9.2	123	-9.3	4.0	64	2.359	0.073	62	3.120	0.079	62	326	2.3	62	62
41	-10	3.6	-6	8.9	123	-12.5	3.3	64	2.684	0.075	62	3.594	0.082	62	324	2.0	62	62
40	-9	3.4	-4	9.0	123	-14.8	3.2	64	3.062	0.084	62	4.137	0.096	62	322	2.0	62	62
39	0	3.9	-2	9.4	123	-17.8	3.6	64	3.502	0.103	62	4.787	0.122	62	320	2.3	62	62
38	1	4.2	-1	9.3	123	-20.5	4.3	64	4.000	0.123	62	5.523	0.154	62	319	2.7	62	62
37	1	3.8	-1	9.6	123	-23.2	4.2	64	4.579	0.134	62	6.389	0.169	62	317	2.8	62	62
36	1	3.4	0	9.7	123	-26.1	4.4	65	5.252	0.138	63	7.414	0.165	63	316	2.9	63	63
35	1	3.4	0	9.2	123	-28.8	4.5	65	6.036	0.125	62	8.611	0.192	62	313	2.9	62	62
34	1	3.4	1	8.5	123	-31.0	4.6	65	6.949	0.143	62	10.013	0.235	62	312	2.8	62	62
33	1	3.2	0	7.8	122	-33.7	4.3	65	8.020	0.177	62	11.682	0.289	62	310	2.7	62	62
32	1	3.4	0	7.4	120	-36.1	4.4	65	9.256	0.209	62	13.608	0.338	62	309	2.4	62	62
31	0	3.3	-1	6.9	118	-38.3	4.3	65	10.677	0.228	62	15.832	0.359	62	307	2.5	62	62
30	0	3.2	-1	6.9	113	-40.6	3.8	65	12.347	0.229	62	18.503	0.378	62	306	2.4	62	62

Table 188. Wind Components and Thermodynamic Data, Point Mugu, California: June

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC

TEMPERATURE IS IN DEGREES CELSIUS

DENSITY IS IN GRAMS PER CUBIC METER

THE M COLUMN IS THE MEAN COLUMN

AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S

1961 THROUGH 1968

HT	-N			-E			W			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
68	0	0	0	0	0	0	-33.0	0	1	-0.85	0.00	1	1.25	0.00	1	310	0	1	312	0	1
67	0	0	0	0	0	0	-29.1	0	1	-1.00	0.00	1	1.44	0.00	1	322	5.3	3	322	5.3	3
66	23	13.4	-7.9	16.8	2	-14.8	8.1	3	-1.18	0.03	3	1.60	-0.02	3	321	5.9	5	321	5.9	5	
65	8	11.6	-6.1	15.6	7	-16.8	9.2	5	-1.31	0.05	5	1.78	-0.03	5	320	5.0	10	320	5.0	10	
64	7	11.6	-6.3	12.6	15	-17.0	7.9	10	-1.48	0.07	10	1.93	-0.06	10	321	4.7	13	321	4.7	13	
63	6	10.4	-5.6	11.9	19	-15.7	7.5	13	-1.71	0.08	13	2.33	-0.10	13	321	4.7	13	321	4.7	13	
62	4	11.4	-5.9	11.7	20	-14.7	5.5	21	-1.97	0.09	21	2.65	-0.11	21	322	4.4	21	322	4.4	21	
61	3	11.1	-5.7	13.1	25	-13.1	4.8	26	-2.25	0.10	26	3.01	-0.13	26	323	2.8	28	323	2.8	28	
60	2	9.7	-5.6	12.8	31	-12.1	4.4	32	-2.54	0.11	32	3.39	-0.14	32	324	2.7	32	324	2.7	32	
59	1	8.3	-5.2	10.8	35	-10.4	3.9	39	-2.90	0.11	38	3.84	-0.14	38	325	2.4	38	325	2.4	38	
58	3	7.5	-5.1	9.4	46	-8.5	3.6	39	-3.30	0.12	39	4.35	-0.15	39	326	2.3	39	326	2.3	39	
57	3	6.7	-4.9	10.7	59	-6.4	3.5	43	-3.76	0.15	43	4.91	-0.18	43	327	2.1	43	327	2.1	43	
56	4	5.3	-4.7	12.2	77	-5.0	4.0	45	-4.27	0.16	45	5.55	-0.19	45	328	2.4	45	328	2.4	45	
55	5	5.8	-4.5	13.0	92	-4.1	4.4	48	-4.64	0.17	48	5.87	-0.20	48	329	2.6	48	329	2.6	48	
54	6	5.1	-4.4	12.8	100	-3.0	4.4	50	-5.50	0.21	50	7.09	-0.20	50	330	2.7	50	330	2.7	50	
53	7	4.9	-4.3	13.1	108	-1.6	3.8	51	-6.24	0.24	51	.801	-0.25	51	330	2.2	51	330	2.2	51	
52	7	4.7	-4.2	12.1	111	-1.0	3.8	51	-7.06	0.28	51	9.05	-0.27	51	331	2.3	51	331	2.3	51	
51	5	4.6	-4.0	10.8	112	-0.4	3.9	53	-7.98	0.26	53	1.021	-0.27	53	321	2.3	51	321	2.3	51	
50	5	4.6	-3.8	9.3	119	-0.1	4.0	53	-9.04	0.27	53	1.154	-0.32	53	331	2.4	53	331	2.4	53	
49	5	4.9	-3.7	6.6	119	+2	3.5	53	-1.026	0.32	53	1.309	-0.39	53	331	2.1	53	331	2.1	53	
48	5	4.9	-3.6	6.1	120	+1	3.8	54	-1.163	0.37	54	1.444	-0.39	54	331	2.3	54	331	2.3	54	
47	4	4.6	-3.5	7.9	120	-0.2	3.7	55	-1.317	0.41	54	1.683	-0.50	54	331	2.3	54	331	2.3	54	
46	3	4.8	-3.4	8.1	120	-0.8	3.8	56	-1.49	0.51	54	1.912	-0.70	54	331	2.3	54	331	2.3	54	
45	2	4.3	-2.5	8.4	121	-0.4	3.5	56	-1.62	0.62	54	2.180	-0.91	54	330	2.1	54	330	2.1	54	
44	1	4.0	-3.1	8.0	121	-3.3	5.2	59	-1.921	0.70	57	2.484	-1.0	57	329	3.1	57	329	3.1	57	
43	1	3.7	-2.8	7.5	121	-5.4	5.1	59	-2.176	0.75	57	2.836	-1.10	57	328	3.1	57	328	3.1	57	
42	1	3.9	-2.7	7.0	121	-7.4	4.8	59	-2.471	0.79	57	3.246	-1.18	57	327	3.0	57	327	3.0	57	
41	1	3.5	-2.5	7.0	122	-10.6	4.2	53	-2.815	0.84	56	3.743	-1.22	56	325	2.6	56	325	2.6	56	
40	1	3.2	-2.3	6.5	122	-13.1	3.9	54	-3.204	0.94	56	4.301	-1.39	55	323	2.4	56	323	2.4	56	
39	2	3.3	-2.1	6.4	121	-16.1	3.6	58	-3.653	1.16	56	4.961	-1.92	56	321	2.2	56	321	2.2	56	
38	3	3.1	-1.9	7.2	120	-19.1	3.9	59	-4.171	1.46	56	5.710	-2.28	56	320	2.4	56	320	2.4	56	
37	0	2.7	-1.6	6.8	120	-21.5	3.8	58	-4.772	1.65	56	6.619	-2.62	56	318	2.5	56	318	2.5	56	
36	0	2.9	-1.6	6.6	120	-24.4	3.4	57	-5.459	1.86	55	7.653	-3.00	55	316	2.2	55	316	2.2	55	
35	1	2.7	-1.5	6.6	120	-26.8	2.8	56	-6.255	1.96	54	8.867	-3.12	54	315	1.7	54	315	1.7	54	
34	1	2.7	-1.3	6.2	119	-26.9	3.2	56	-7.190	2.05	54	10.255	-3.60	54	313	2.0	54	313	2.0	54	
33	2.5	6.2	-1.3	6.2	119	-31.0	2.9	56	-8.167	2.19	54	11.903	-3.59	54	312	1.9	54	312	1.9	54	
32	2.4	6.2	-1.2	6.2	117	-33.5	2.9	56	-9.513	2.30	53	13.844	-3.61	53	310	1.8	53	310	1.8	53	
31	1	6.1	-1.6	5.7	116	-35.7	2.9	57	-10.956	2.24	54	16.083	-354	54	309	1.6	54	309	1.6	54	
30	2.3	6.2	-1.2	6.1	114	-37.9	2.4	57	-12.653	2.42	54	18.748	-375	54	307	1.6	54	307	1.6	54	

Table 189. Wind Components and Thermodynamic Data, Point Mugu, California: July
 HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

HT	-N+S			-E+N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
67	24	0	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
68	18	63.9	-25	6.2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	16	9.7	-41	12.2	5	0	0	0	0	0	0	0	0	0	0	0	0	0
64	16	11.4	-53	18.0	6	-12.0	0	1	•153	•000	1	•191	•000	1	324	0	1	0
63	9	11.9	-59	13.3	12	-12.6	1.1	2	•172	•002	2	•217	•002	2	323	1	2	1
62	5	12.4	-61	12.3	17	-12.4	3.8	9	•193	•006	9	•254	•011	9	321	2.1	9	2
61	5	11.5	-63	13.7	19	-14.4	4.1	13	•226	•010	13	•296	•018	13	322	2.2	13	2
60	3	11.7	-62	12.5	24	-12.2	3.5	14	•258	•013	14	•334	•024	14	324	1.9	14	1
59	3	11.1	-63	12.4	34	-11.7	3.7	23	•288	•016	23	•376	•023	23	324	2.1	23	2
58	5	9.4	-62	9.5	43	-10.3	3.0	29	•322	•019	28	•434	•027	28	325	1.8	28	2
57	5	7.6	-62	10.5	55	-8.5	3.1	32	•380	•022	31	•493	•029	31	326	2.0	31	2
56	6	7.6	-59	9.7	69	-6.9	3.3	38	•430	•023	37	•557	•029	37	327	2.1	37	2
55	6	7.1	-57	8.5	92	-4.8	6.6	42	•488	•020	41	•628	•032	41	328	4.0	41	4
54	6	6.5	-56	6.1	93	-4.2	5.6	44	•555	•033	43	•714	•038	43	329	3.4	43	4
53	6	6.4	-54	7.3	99	-3.8	4.7	44	•629	•038	43	•806	•045	43	329	2.9	43	4
52	6	6.5	-53	7.4	104	-3.1	4.9	46	•712	•044	45	•912	•049	45	329	3.0	45	4
51	5	5.9	-51	6.7	104	-1.9	4.6	48	•808	•049	46	•1.031	•055	46	330	2.7	46	4
50	5	5.2	-49	6.3	108	-1.3	4.2	50	•917	•051	47	•1.168	•059	47	330	2.4	47	4
49	5	4.8	-48	5.2	111	-1.4	4.2	51	•1.035	•052	48	•1.321	•052	48	330	2.4	48	4
48	5	4.6	-46	5.0	112	-1.8	4.2	51	•1.173	•058	48	•1.499	•069	48	330	2.5	48	4
47	5	4.9	-47	5.3	112	-1.6	3.9	51	•1.326	•062	48	•1.695	•080	48	330	2.4	48	4
46	4	4.5	-43	6.1	113	-2.1	4.1	50	•1.502	•063	48	•1.926	•079	48	330	2.4	48	4
45	3	4.8	-42	6.1	115	-1.4	4.2	50	•1.703	•072	48	•2.200	•088	48	329	2.5	48	4
44	2	4.3	-40	5.8	115	-6.4	4.0	50	•1.929	•078	48	•2.511	•095	48	327	2.4	48	4
43	0	4.2	-38	5.4	115	-6.8	3.6	50	•2.188	•088	48	•2.876	•106	48	325	2.4	48	4
42	-0	4.3	-35	4.7	115	-10.6	3.4	50	•2.485	•108	48	•3.288	•121	48	325	2.1	48	4
41	0	3.9	-33	4.3	115	-13.2	3.6	50	•2.831	•107	48	•3.780	•126	48	323	2.3	48	4
40	1	3.6	-31	4.0	116	-15.9	3.7	50	•3.235	•109	48	•4.317	•127	48	323	8.4	48	4
39	2	3.8	-29	4.3	116	-18.8	4.4	51	•3.686	•117	49	•5.058	•124	49	320	2.8	48	4
38	1	4.0	-28	4.5	116	-20.8	4.7	52	•4.209	•125	50	•5.797	•147	50	318	3.0	50	4
37	0	3.8	-26	4.2	116	-23.7	4.2	51	•4.804	•128	49	•6.696	•142	49	317	2.7	49	4
36	0	3.7	-25	3.9	116	-25.9	5.2	52	•5.508	•138	49	•7.760	•166	49	315	2.8	49	4
35	1	3.5	-23	4.3	115	-27.3	6.5	53	•6.33	•155	49	•8.999	•201	49	314	2.7	49	4
34	1	2.8	-22	4.2	115	-29.0	6.4	54	•7.318	•144	50	•10.479	•516	50	313	2.7	50	4
33	2	2.9	-21	3.8	115	-31.2	6.4	54	•8.416	•370	50	•12.157	•567	50	311	2.6	50	4
32	2	3.2	-21	3.6	112	-33.4	5.4	54	•9.684	•371	50	•14.110	•577	50	310	2.6	50	4
31	1	2.6	-20	3.3	107	-35.8	4.5	54	•11.159	•356	50	•16.416	•543	50	308	2.1	50	4
30	0	2.5	-20	3.8	104	-38.2	4.3	54	•12.872	•318	50	•19.123	•525	50	307	2.1	50	4

Table 190. Wind Components and Thermodynamic Data, Point Mugu, California: August

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE 'N' COLUMN IS THE NUMBER OF VALUES FOR THE M AND S

H'	W			E			N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
76	17	16.9	.4	20.9	2	.2	9	9	.2	10	9	.2	10.5	2	.2	10.5	2	.2	324	7.0	2
69	20	14.9	.10	16.5	2	.2	9	9	.2	10.5	2	.2	10.1	2	.2	10.4	2	.2	323	6.4	2
68	22	12.8	.15	10.1	2	.2	7	7	.2	10.5	2	.2	10.7	3	.2	10.7	3	.2	324	5.3	2
67	25	10.7	.21	17.0	4	.2	10.5	4	.2	11.5	2	.2	11.0	3	.2	11.0	3	.2	324	4.2	2
66	13	16.5	.13	14.8	.21	.2	10.5	5	.2	11.5	2	.2	11.5	2	.2	11.5	2	.2	325	3.3	2
65	14	14.8	.26	24.7	.5	.2	10.5	6	.2	11.5	2	.2	11.5	2	.2	11.5	2	.2	324	2.3	2
64	16	13.1	.26	24.1	.6	.2	10.5	7	.2	11.5	2	.2	11.5	3	.2	11.5	3	.2	324	2.1	2
63	4	13.1	.25	27.1	10	.2	10.5	8	.2	11.5	2	.2	11.5	3	.2	11.5	3	.2	324	2.0	2
62	0	9.8	.30	25.2	13	.2	11.4	6.5	.2	11.5	7	.2	11.5	7	.2	11.5	7	.2	324	1.9	2
61	-2	8.5	.33	21.6	15	.2	11.4	6.8	.2	11.5	9	.2	11.5	9	.2	11.5	9	.2	324	1.8	2
60	1	8.3	.34	19.3	19	.2	11.7	10.7	.2	11.7	10.7	.2	11.7	10.7	.2	11.7	10.7	.2	325	1.7	2
59	2	8.8	.37	15.7	25	.2	12.2	6.0	.2	12.7	6.0	.2	12.7	6.0	.2	12.7	6.0	.2	324	1.6	2
58	3	8.8	.37	16.5	31	.2	11.5	5.9	.2	12.7	5.9	.2	12.7	5.9	.2	12.7	5.9	.2	324	1.5	2
57	4	9.9	.40	13.6	39	.2	10.4	5.7	.2	12.5	35	.2	12.5	35	.2	12.5	35	.2	326	4.3	2
56	5	9.4	.41	14.4	54	.2	8.9	5.3	.2	12.5	42	.2	12.5	42	.2	12.5	42	.2	326	3.2	2
55	6	8.5	.41	13.8	72	.2	7.6	5.9	.2	12.5	47	.2	12.5	47	.2	12.5	47	.2	326	3.1	2
54	7	7.7	.40	13.7	92	.2	5.7	5.2	.2	12.5	52	.2	12.5	52	.2	12.5	52	.2	326	3.0	2
53	7	7.4	.39	12.2	99	.2	4.9	5.5	.2	12.5	50	.2	12.5	50	.2	12.5	50	.2	328	3.5	2
52	7	7.2	.39	11.5	105	.2	4.2	5.4	.2	12.5	51	.2	12.5	51	.2	12.5	51	.2	329	3.4	2
51	7	6.7	.38	10.6	117	.2	3.6	4.9	.2	12.5	52	.2	12.5	52	.2	12.5	52	.2	329	3.3	2
50	6	6.9	.38	10.4	119	.2	2.9	4.8	.2	12.5	52	.2	12.5	52	.2	12.5	52	.2	326	3.2	2
49	5	6.6	.37	10.1	122	.2	2.7	4.6	.2	12.5	53	.2	12.5	53	.2	12.5	53	.2	326	3.1	2
48	4	6.3	.36	10.3	123	.2	2.5	4.8	.2	12.5	54	.2	12.5	54	.2	12.5	54	.2	326	3.0	2
47	3	5.4	.36	10.0	124	.2	2.1	4.6	.2	12.5	55	.2	12.5	55	.2	12.5	55	.2	326	2.9	2
46	3	5.0	.35	9.9	126	.2	4.1	6.1	.2	12.5	56	.2	12.5	56	.2	12.5	56	.2	326	2.8	2
45	2	4.5	.33	6.6	129	.2	5.5	6.6	.2	12.5	57	.2	12.5	57	.2	12.5	57	.2	328	2.3	2
44	1	4.3	.32	6.1	129	.2	7.4	3.6	.2	12.5	58	.2	12.5	58	.2	12.5	58	.2	326	2.2	2
43	0	4.2	.31	7.1	131	.2	9.8	3.5	.2	12.5	59	.2	12.5	59	.2	12.5	59	.2	325	2.1	2
42		3.9	.31	7.7	131	.2	13.1	3.3	.2	12.5	60	.2	12.5	60	.2	12.5	60	.2	326	2.0	2
41		3.6	.31	7.2	131	.2	16.2	3.2	.2	12.5	61	.2	12.5	61	.2	12.5	61	.2	321	2.0	2
40		3.8	.25	5.9	133	.2	14.5	3.7	.2	12.5	62	.2	12.5	62	.2	12.5	62	.2	320	2.1	2
39		3.5	.24	6.9	133	.2	20.9	3.8	.2	12.5	63	.2	12.5	63	.2	12.5	63	.2	318	2.0	2
38		3.2	.23	5.9	133	.2	23.1	3.6	.2	12.5	64	.2	12.5	64	.2	12.5	64	.2	317	2.0	2
37		3.0	.21	5.7	132	.2	25.3	3.9	.2	12.5	65	.2	12.5	65	.2	12.5	65	.2	316	2.0	2
36		2.9	.20	5.3	132	.2	27.7	4.0	.2	12.5	66	.2	12.5	66	.2	12.5	66	.2	316	1.9	2
35		3.1	.19	4.8	132	.2	29.8	3.8	.2	12.5	67	.2	12.5	67	.2	12.5	67	.2	314	1.9	2
34		3.0	.19	5.0	132	.2	31.7	3.8	.2	12.5	68	.2	12.5	68	.2	12.5	68	.2	313	1.9	2
33		2.9	.19	4.8	131	.2	33.3	3.7	.2	12.5	69	.2	12.5	69	.2	12.5	69	.2	312	1.9	2
32		2.5	.19	4.3	131	.2	35.4	3.8	.2	12.5	70	.2	12.5	70	.2	12.5	70	.2	310	1.9	2
31		2.6	.19	4.0	129	.2	37.6	3.4	.2	12.5	71	.2	12.5	71	.2	12.5	71	.2	308	2.0	2
30		2.1	.19	4.0	129	.2	39.7	3.6	.2	12.5	72	.2	12.5	72	.2	12.5	72	.2	306	2.0	2

Table 191. Wind Components and Thermodynamic Data, Point Mugu, California: September

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

H _i	W			-N.S			M			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	-E _i	S	N	M	S	N	M	S	N	M	S	N	M	S	N	M	N	S
69	-1.9	2.1	1.1	3.1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	-1.3	1.3	1.2	2.4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67	-1.7	1.5	1.3	1.7	2	-47.0	0	1	.097	.000	1	.153	.000	1	.153	.000	1	.153	.000	1	.153
66	-1.2	1.4	1.6	3.7	6	-46.0	0	1	.113	0	1	.177	.000	1	.177	.000	1	.177	.000	1	.177
65	-1.2	1.6	1.7	9	13.6	13.3	4	.134	.005	4	.183	.012	4	.183	.012	4	.183	.012	4	.183	
64	1.1	6.1	1.4	13.1	10	-13.3	9.3	6	.152	.009	6	.207	.013	6	.207	.013	6	.207	.013	6	.207
63	3.3	7.0	9	18.1	10	-11.5	6.6	9	.172	.010	9	.233	.015	9	.233	.015	9	.233	.015	9	.233
62	5.5	7.5	5	21.1	12	-10.4	5.3	15	.194	.013	15	.261	.018	15	.261	.018	15	.261	.018	15	.261
61	5.8	6	6	21.9	13	-9.7	5.3	19	.220	.015	19	.294	.020	19	.294	.020	19	.294	.020	19	.294
60	5.6	6	6	21.6	15	-8.1	4.1	24	.248	.016	23	.330	.021	23	.330	.021	23	.330	.021	23	.330
59	5.8	6.8	6	18.6	20	-7.6	4.2	29	.283	.016	28	.375	.022	28	.375	.022	28	.375	.022	28	.375
58	3	8.0	1	16.4	32	-6.6	4.1	35	.318	.019	33	.420	.024	33	.420	.024	33	.420	.024	33	.420
57	4	7.1	-3	15.3	51	-5.4	4.0	38	.361	.022	36	.474	.030	36	.474	.030	36	.474	.030	36	.474
56	5	6.7	-3	15.6	61	-5.5	4.0	43	.408	.024	41	.535	.033	41	.535	.033	41	.535	.033	41	.535
55	6	6.8	-3	14.6	67	-5.4	3.8	50	.464	.025	47	.609	.036	47	.609	.036	47	.609	.036	47	.609
54	6	6.2	-4	14.3	79	-4.6	5.4	54	.525	.032	51	.685	.041	51	.685	.041	51	.685	.041	51	.685
53	6	7.5	-6	14.3	89	-3.5	5.1	55	.595	.035	53	.775	.048	53	.775	.048	53	.775	.048	53	.775
52	6	6.2	-7	14.3	97	-3.6	4.7	55	.674	.038	53	.878	.052	53	.878	.052	53	.878	.052	53	.878
51	5	5.6	-7	14.0	100	-2.8	4.6	55	.763	.041	54	.991	.056	54	.991	.056	54	.991	.056	54	.991
50	4	5.6	-8	13.9	102	-2.7	4.7	58	.863	.044	57	1.121	.061	57	1.121	.061	57	1.121	.061	57	1.121
49	4	5.9	-8	13.3	102	-2.7	4.8	59	.980	.050	58	1.273	.068	58	1.273	.068	58	1.273	.068	58	1.273
48	4	5.0	-9	12.4	104	-3.7	5.0	58	1.109	.054	57	1.446	.073	57	1.446	.073	57	1.446	.073	57	1.446
47	3	4.5	-9	11.7	104	-4.7	5.2	60	1.258	.059	59	1.639	.087	59	1.639	.087	59	1.639	.087	59	1.639
46	2	4.4	-10	11.2	105	-5.7	5.0	60	1.426	.065	59	1.865	.109	59	1.865	.109	59	1.865	.109	59	1.865
45	1	4.4	-10	11.1	107	-6.8	4.5	59	1.620	.070	58	2.128	.131	58	2.128	.131	58	2.128	.131	58	2.128
44	1	4.6	-11	10.7	110	-8.1	4.4	60	1.840	.079	59	2.431	.129	59	2.431	.129	59	2.431	.129	59	2.431
43	0	4.3	-10	10.6	111	-10.6	4.0	60	2.092	.086	59	2.765	.164	59	2.765	.164	59	2.765	.164	59	2.765
42	0	4.1	-8	11.1	111	-13.6	4.3	61	2.381	.093	60	3.206	.169	60	3.206	.169	60	3.206	.169	60	3.206
41	0	4.3	-8	10.2	111	-16.5	4.9	61	2.713	.103	60	3.692	.185	60	3.692	.185	60	3.692	.185	60	3.692
40	1	4.1	-8	9.4	111	-18.8	5.1	62	3.098	.110	61	4.258	.211	61	4.258	.211	61	4.258	.211	61	4.258
39	0	4.0	-8	9.1	111	-22.0	5.0	63	3.543	.119	61	4.931	.246	61	4.931	.246	61	4.931	.246	61	4.931
38	0	3.9	-7	8.7	111	-25.2	4.3	63	4.058	.136	61	5.716	.296	61	5.716	.296	61	5.716	.296	61	5.716
37	0	3.5	-6	8.4	111	-27.6	4.0	64	4.660	.149	62	6.628	.345	62	6.628	.345	62	6.628	.345	62	6.628
36	1	3.0	-6	8.1	111	-31.0	3.9	64	5.357	.164	62	7.696	.393	62	7.696	.393	62	7.696	.393	62	7.696
35	2	3.0	-6	8.0	111	-31.7	3.9	64	6.163	.192	62	8.912	.475	62	8.912	.475	62	8.912	.475	62	8.912
34	2	3.0	-7	7.7	111	-33.7	4.0	64	7.094	.217	62	10.345	.549	62	10.345	.549	62	10.345	.549	62	10.345
33	2	2.8	-7	7.3	111	-36.0	3.5	63	8.082	.250	61	12.116	.425	61	12.116	.425	61	12.116	.425	61	12.116
32	1	2.9	-7	7.1	111	-37.5	4.2	64	9.455	.288	62	14.105	.480	62	14.105	.480	62	14.105	.480	62	14.105
31	0	3.2	-8	7.0	111	-39.5	4.0	64	10.930	.310	62	16.435	.519	62	16.435	.519	62	16.435	.519	62	16.435
30	0	3.1	-8	6.7	110	-41.7	4.2	64	12.528	.338	62	19.145	.503	62	19.145	.503	62	19.145	.503	62	19.145

Table 192. Wind Components and Thermodynamic Data, Point Mugu, California: October

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METRE,
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S

H	-E+S			-E-S			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
67	-2	3.5	5.3	12.9	2	0	0	0	0	0	0	0	0	0	0	0	0	0
66	3	8.3	4.7	9.6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
65	3	6.6	5.0	20.3	9	5.0	2.3	2	3	129	0.016	2	167	0.019	3	326	1.1	3
64	10	9.4	5.7	16.7	13	7.2	3.5	3	1.43	0.018	3	1.187	0.023	4	326	1.5	4	
63	10	11.2	5.7	17.5	17	8.6	2.7	4	1.158	0.020	4	1.208	0.025	4	326	1.5	4	
62	12	10.2	5.5	17.5	14	8.9	2.2	9	1.178	0.016	9	1.235	0.019	9	326	2.1	9	
61	12	10.4	5.4	18.7	25	9.2	3.3	18	1.03	0.014	17	1.267	0.017	17	326	2.1	17	
60	10	10.7	5.0	19.8	29	8.2	3.8	26	1.230	0.013	25	1.302	0.016	25	327	2.5	25	
59	9	10.1	4.9	19.6	36	6.8	4.4	32	1.259	0.013	30	1.339	0.017	30	327	2.5	30	
58	6	9.6	4.8	18.7	52	6.0	6.5	34	1.294	0.016	31	1.384	0.019	31	327	2.5	31	
57	6	8.9	4.8	18.1	66	5.6	6.1	39	1.336	0.018	36	1.439	0.021	36	327	2.0	36	
56	6	8.5	4.6	17.8	75	5.4	5.6	41	1.381	0.019	38	1.497	0.023	38	328	1.5	38	
55	7	8.8	4.4	16.8	84	4.7	5.1	47	1.433	0.022	43	1.564	0.028	43	328	2.0	43	
54	5	9.5	3.3	16.1	95	4.0	5.0	49	1.492	0.024	45	1.637	0.029	45	329	2.0	45	
53	7	9.7	4.1	15.7	103	3.4	5.7	50	1.560	0.029	46	1.725	0.032	46	329	2.7	46	
52	7	9.4	4.0	15.3	107	3.3	5.6	51	1.635	0.032	47	1.821	0.035	47	329	2.6	47	
51	7	8.5	3.8	15.5	110	3.2	5.1	51	1.719	0.035	48	1.930	0.040	48	329	2.4	48	
50	7	7.8	3.7	15.6	117	3.5	5.0	51	1.816	0.044	48	2.056	0.049	48	329	2.5	48	
49	7	7.3	3.6	16.2	119	4.1	5.1	52	1.928	0.050	48	2.102	0.054	48	329	2.5	48	
48	6	7.4	3.4	16.3	121	4.7	5.4	52	1.952	0.055	48	1.365	0.061	48	329	2.6	48	
47	5	7.5	3.2	15.7	121	6.0	6.0	52	1.192	0.061	48	1.555	0.070	48	328	2.6	48	
46	4	7.5	3.1	15.6	123	7.4	6.2	53	1.153	0.066	48	1.776	0.078	48	327	2.6	48	
45	2	7.0	3.0	15.7	123	9.1	6.4	54	1.539	0.069	50	2.034	0.084	50	326	2.9	50	
44	1	6.4	2.8	15.5	123	11.0	6.4	54	1.751	0.073	50	2.333	0.089	50	325	3.0	50	
43	0	6.4	2.7	15.2	123	13.1	6.4	55	1.995	0.078	50	2.682	0.093	50	323	3.0	50	
42	0	5.7	2.5	15.2	125	15.5	6.5	55	2.069	0.085	50	3.081	0.102	50	321	3.4	50	
41	0	5.0	2.5	15.4	125	18.7	6.6	56	2.090	0.095	50	3.557	0.117	50	320	3.3	50	
40	0	4.6	2.4	15.5	125	21.4	6.4	55	2.164	0.098	50	4.115	0.119	50	318	2.9	50	
39	2	4.3	2.2	14.8	125	24.5	6.0	56	2.394	0.107	51	4.775	0.128	51	316	2.5	51	
38	1	4.6	2.1	13.9	124	27.0	5.9	58	3.883	0.125	52	5.518	0.164	52	314	2.9	52	
37	0	4.3	2.0	13.5	124	29.6	5.7	59	4.662	0.139	53	6.392	0.183	53	313	3.1	53	
36	0	5.1	2.0	11.9	123	31.6	5.2	59	5.140	0.153	53	7.432	0.202	53	311	3.0	53	
35	0	4.8	1.9	11.4	123	33.4	5.1	59	5.915	0.167	53	8.604	0.230	53	310	3.1	53	
34	0	4.6	1.9	11.3	120	35.6	5.3	59	6.820	0.183	53	10.012	0.256	53	309	3.2	53	
33	0	4.1	1.9	9.8	120	37.9	4.5	58	7.879	0.197	52	11.685	0.252	52	307	2.5	52	
32	0	3.7	1.9	9.0	119	40.2	4.3	58	9.111	0.206	52	13.644	0.273	52	306	2.6	52	
31	0	3.4	1.7	7.6	117	42.6	4.0	58	10.559	0.224	52	15.983	0.246	52	304	2.4	52	
30	0	3.0	1.6	7.9	115	44.2	4.0	57	12.244	0.245	52	18.568	0.303	52	303	2.4	52	

Table 193. Wind Components and Thermodynamic Data, Point Mugu, California: November

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL
 THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC
 TEMPERATURE IS IN DEGREES CELSIUS
 DENSITY IS IN GRAMS PER CU METER
 THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN
 AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE M AND S.

HT	-N+S			-E+N			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S
68	1	0	0.5	65	0	1	-5.5	0	1	0.069	0	1	.091	0	1	328	0	1
67	3	0.3	0.6	65	0	1	-3.0	0	1	.079	0	1	.102	0	1	330	0	1
66	1	3.2	65	6	2	0	-3.4	0	1	.090	0	1	.116	0	1	329	0	1
65	6	7.7	58	12.3	4	0	-2.7	2.6	3	.108	.005	3	.139	.005	3	330	1.5	3
64	2	8.5	52	18.1	6	4	-4.2	3.7	3	.124	.006	3	.161	.006	3	329	2.3	3
63	-2	9.5	57	24.6	12	5	-5.3	3.1	7	.144	.008	7	.187	.010	7	328	1.9	7
62	0	9.6	58	22.1	17	5	-5.9	3.3	12	.164	.007	12	.215	.010	12	328	2.0	12
61	4	15.5	61	22.4	19	6	-6.6	4.5	17	.186	.009	17	.246	.013	17	327	2.9	17
60	6	18.7	63	22.4	22	6	-7.6	4.3	22	.211	.011	22	.279	.015	22	327	2.7	22
59	6	17.5	65	22.4	24	6	-7.6	4.4	26	.241	.012	26	.319	.017	26	327	2.7	26
58	9	15.5	68	21.5	33	7	-7.0	4.1	28	.276	.014	28	.363	.020	28	327	2.6	28
57	7	14.6	67	22.5	43	7	-7.5	4.7	32	.316	.015	32	.416	.049	32	327	2.9	32
56	9	12.9	66	21.3	56	7	-7.6	4.6	36	.362	.017	36	.479	.063	36	327	2.9	36
55	10	12.3	66	20.7	65	7	-7.7	6.2	42	.411	.016	41	.545	.113	41	326	3.1	41
54	10	11.3	64	20.5	71	7	-7.8	5.7	45	.466	.016	44	.622	.142	44	326	2.8	44
53	9	11.1	63	20.6	77	6	-6.7	5.9	48	.536	.013	47	.708	.167	47	327	3.0	47
52	7	9.9	61	19.6	81	6	-6.8	5.5	50	.608	.012	49	.804	.192	49	327	2.9	49
51	7	10.4	60	19.6	87	6	-6.6	5.6	52	.689	.013	51	.911	.214	51	327	3.1	51
50	7	10.4	58	19.8	88	6	-6.7	5.6	52	.689	.015	51	.911	.214	51	327	3.1	51
49	5	10.3	58	20.0	49	7	-7.0	5.7	55	.781	.015	51	1.033	.238	51	327	3.1	51
48	5	10.6	55	20.9	93	7	-7.5	5.6	55	.884	.018	54	1.170	.253	54	327	3.3	54
47	3	10.5	52	20.3	93	9	-9.1	5.6	55	1.002	.018	54	1.329	.271	54	327	3.3	54
46	2	10.2	51	19.8	94	11	-1.1	5.9	55	1.139	.018	54	1.519	.286	54	326	3.3	54
45	2	9.7	48	19.5	94	13	-4.2	6.2	56	1.296	.016	54	1.733	.297	54	324	3.5	54
44	1	9.5	46	19.6	94	15	-1.1	6.1	56	1.468	.020	54	1.988	.305	54	323	3.7	54
43	1	9.4	44	19.9	93	18	-1.1	6.1	56	1.667	.020	54	2.270	.307	54	322	3.7	54
42	1	9.1	41	20.2	93	21	-0.1	5.1	57	1.901	.021	54	2.621	.301	54	320	3.4	54
41	1	8.8	39	19.9	93	23	-0.6	4.5	57	2.164	.017	55	3.017	.294	55	318	3.1	55
40	1	8.9	36	19.6	93	26	-0.7	4.5	57	2.822	.018	55	3.476	.286	55	326	3.1	55
39	1	8.6	33	19.2	93	29	-0.2	5.0	57	3.235	.016	55	4.019	.270	55	315	2.7	55
38	2	8.2	30	18.3	92	31	-4.7	57	57	3.707	.015	55	4.653	.305	55	313	3.2	55
37	2	7.5	27	17.6	92	33	-0.0	4.9	58	4.263	.014	56	5.377	.219	55	312	3.0	55
36	2	7.2	24	17.6	92	35	-1.1	4.8	58	4.911	.015	56	6.227	.205	56	311	3.2	56
35	2	7.1	21	17.3	92	37	-1.1	4.7	58	5.671	.015	56	7.233	.231	56	309	3.1	56
34	2	6.7	18	16.4	91	39	-0.2	4.2	58	6.557	.012	56	8.424	.278	56	308	3.0	56
33	2	6.5	16	15.8	91	40	-0.7	4.1	57	7.585	.020	56	9.825	.306	56	307	2.7	56
32	1	5.2	14	15.0	91	42	-2.4	4.2	57	8.781	.020	56	11.435	.311	55	306	2.7	55
31	1	4.3	12	14.3	90	44	-6.2	4.0	56	10.190	.023	54	13.339	.327	55	305	2.8	55
30	1	4.1	10	13.5	87	46	-6.2	4.0	56	11.825	.025	54	15.602	.351	54	303	2.7	54

Table 194. Wind Components and Thermodynamic Data, Point Mugu, California: December

HEIGHT IS IN KILOMETERS ABOVE SEA LEVEL

THE WIND COMPONENTS AND SPEED OF SOUND ARE IN M/SEC

TEMPERATURE IS IN DEGREES CELSIUS

DENSITY IS IN GRAMS PER CU METER

THE M COLUMN IS THE MEAN COLUMN, THE S COLUMN IS THE STANDARD DEVIATION COLUMN

AND THE N COLUMN IS THE NUMBER OF VALUES FOR THE MEANS

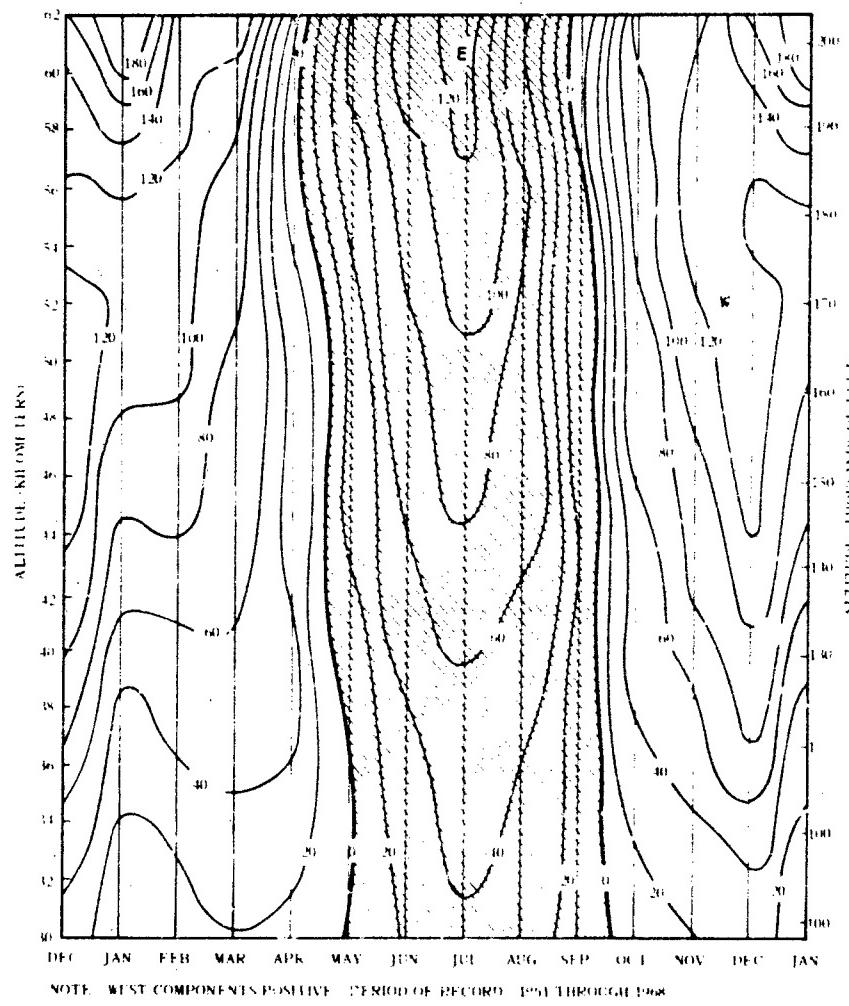
1961 THROUGH 1968

HT	-N			-E			W			TEMP			PRESSURE			DENSITY			SPEED OF SOUND		
	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	H	S	N	
7.1	37	62	0	1	1	0	-14.0	2.7	2	-10.8	0.09	2	-14.9	0.010	2	323	1.5				
7.0	36	67	0	1	1	0	27.9	9.6	2	-15.6	0.125	4	-17.1	-0.010	4	322	1.9				
6.9	36	72	0	1	1	0	21.5	9.9	3	-13.0	0.143	6	-19.4	-0.013	6	323	1.9				
6.8	34	100	0	1	1	0	19.6	7.5	4	10.6	0.169	10	1.2	-0.012	12	323	4.5				
6.7	63	12	19.8	87	22.1	6	-10.4	7.4	13	-10.3	0.191	13	1.8	-0.014	18	324	4.0				
6.6	29.5	86	3.0	29.3	90	2	-14.0	2.7	2	-10.8	0.09	2	-26.9	-0.014	22	324	3.5				
6.5	5	2.7	0	2.7	9.0	2	-15.6	8.1	4	-13.0	0.143	6	-24.9	-0.014	28	324	5.0				
6.4	3	21.5	9.9	3.9	3	4	-10.4	7.4	13	-10.3	0.191	13	1.8	-0.014	22	324	4.0				
6.3	4	19.6	10.0	7.5	4	4	-10.4	7.4	13	-10.3	0.191	13	1.8	-0.014	22	324	3.5				
6.2	12	19.8	87	22.1	6	7	-10.3	6.2	19	-10.3	0.191	13	1.8	-0.014	18	324	3.5				
6.1	17	17.7	80	26.8	7	7	-10.3	6.2	19	-10.3	0.191	13	1.8	-0.014	18	324	3.5				
6.0	15	21.7	10	24.1	7.3	10	-10.6	7.9	29	-10.6	0.191	28	-33.2	-0.018	28	325	5.0				
5.9	11	20.8	69	24.7	1.6	1	-10.6	7.9	29	-10.6	0.191	28	-37.7	-0.022	32	326	7.7				
5.8	16	16.6	65	22.8	22	18.6	-7.3	35	-28.4	0.019	32	-42.9	-0.025	34	327	4.2					
5.7	14	16.7	64	28.2	32	17.4	6.5	37	-32.4	0.021	34	-48.7	-0.026	36	327	4.0					
5.6	14	18.0	60	33.3	38	16.5	6.4	39	-36.9	0.023	36	-54.9	-0.029	37	328	3.8					
5.5	13	16.1	60	32.9	40	15.4	5.8	40	-41.8	0.024	37	-61.9	-0.032	38	328	3.5					
5.4	15	32.7	53	14.7	5.7	4.7	-1.7	5.7	41	-47.4	0.026	38	-69.7	-0.038	39	329	3.7				
5.3	16	16.6	62	31.8	58	14.0	6.0	43	-53.5	0.029	39	-78.6	-0.042	40	329	4.0					
5.2	15	17.0	64	30.6	64	12.6	6.2	43	-60.5	0.032	40	-86.6	-0.048	40	329	3.8					
5.1	14	16.6	64	30.8	74	11.9	6.4	43	-68.5	0.036	40	-98.6	-0.051	40	329	3.7					
5.0	12	16.1	67	30.5	74	11.9	6.2	42	-77.7	0.039	40	-10.04	-0.051	40	329	3.7					
4.9	11	16.5	68	30.0	77	11.8	6.7	43	-87.5	0.042	42	-1.132	-0.051	42	329	3.9					
4.8	11	16.0	67	28.7	79	11.8	6.6	44	-97.4	0.042	43	-1.279	-0.056	43	329	3.9					
4.7	10	15.9	65	27.5	79	11.8	6.6	44	-99.0	0.045	43	-1.450	-0.064	43	329	4.3					
4.6	10	16.9	64	26.2	61	11.7	9.6	45	-1.122	0.049	43	-1.644	-0.077	44	329	4.2					
4.5	10	16.9	63	26.2	62	12.6	9.6	46	-1.272	0.052	42	-1.873	-0.092	45	329	4.5					
4.4	9	16.3	62	25.8	64	15.1	9.0	46	-1.442	0.059	45	-2.146	-0.101	47	328	4.6					
4.3	8	15.2	59	25.2	60	17.8	8.5	47	-1.637	0.066	47	-2.464	-0.111	47	328	4.2					
4.2	6	14.3	56	24.0	61	14.4	7.2	48	-1.860	0.074	47	-2.697	-0.121	48	328	4.0					
4.1	5	13.7	53	22.8	64	15.0	6.8	49	-2.114	0.085	48	-3.274	-0.136	49	328	4.8					
4.0	4	13.2	51	21.9	65	14.5	6.5	50	-2.735	0.098	50	-3.782	-0.151	50	329	5.0					
3.9	3	13.1	48	20.9	62	13.8	6.4	51	-3.124	0.118	51	-4.411	-0.175	51	329	5.1					
3.8	3	12.9	44	19.8	63	13.0	6.3	51	-3.583	0.135	51	-5.142	-0.216	51	329	5.2					
3.7	3	11.6	41	19.1	65	13.0	6.5	51	-4.129	0.132	51	-5.992	-0.246	51	329	5.1					
3.6	2	11.3	36	18.1	65	13.4	6.6	51	-4.763	0.136	51	-7.009	-0.259	51	329	5.2					
3.5	2	11.1	31	18.0	65	13.5	6.7	51	-5.499	0.138	51	-8.193	-0.267	51	329	5.3					
3.4	1	10.8	27	19.0	62	13.6	6.5	51	-6.351	0.152	51	-9.568	-0.312	51	329	5.1					
3.3	0	10.6	22	17.3	62	12.9	6.2	51	-7.363	0.161	51	-11.220	-0.348	51	329	5.1					
3.2	-1	9.6	18	16.6	61	12.5	6.0	51	-8.532	0.192	51	-13.129	-0.395	51	329	5.1					
3.1	-1	8.0	15	16.0	60	12.5	6.1	51	-9.915	0.223	51	-15.323	-0.456	51	329	5.1					
3.0	-1	7.2	11	15.2	60	12.6	6.1	51	-11.529	0.256	51	-17.923	-0.491	51	329	5.1					

MEAN WIND COMPONENT TIME SECTIONS

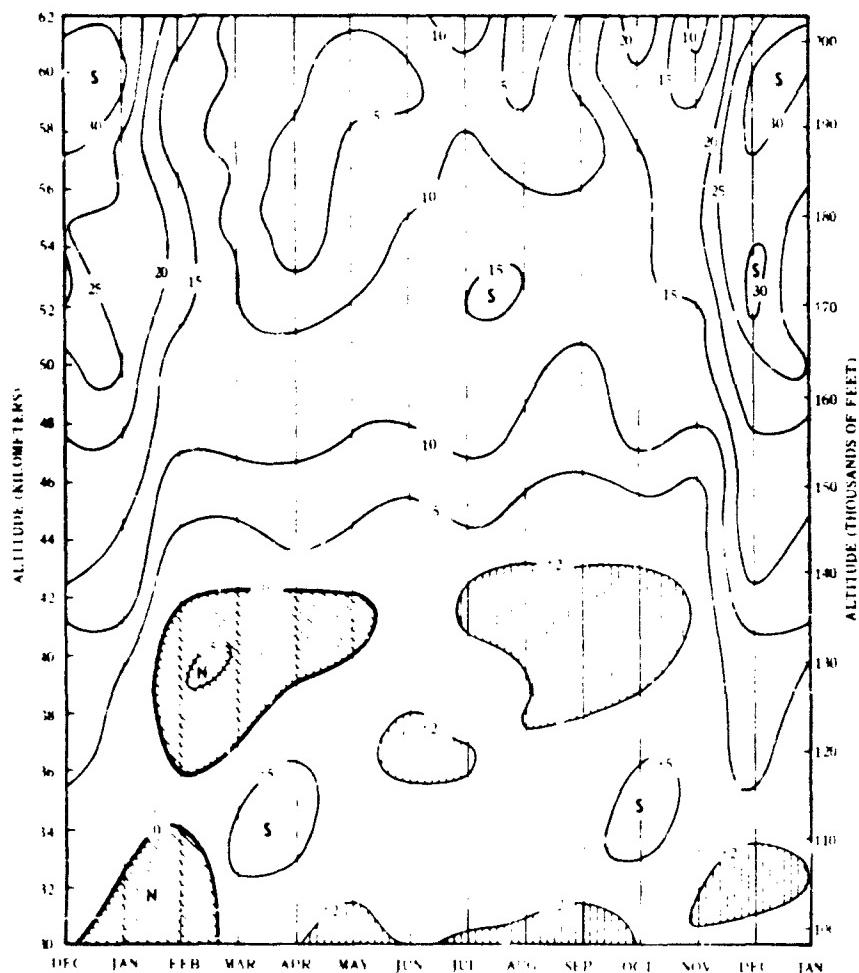
Figure 35 presents vertical time sections of the mean zonal and meridional wind components over Point Mugu between 30 and 62 kilometers (98,000 to 203,000 feet) for each month of the year from data extracted from the tables in the preceding section.

The zonal wind pattern, figure 35 (a), exhibits a striking seasonal shift from strong easterlies in the summer months to stronger westerlies in the winter months. The spring reversal, the transition from westerlies to easterlies, appears in these data first at the high altitudes in April and works its way downward to appear in the lower altitudes in May. The fall reversal, returning to the westerly flow, occurs generally in September. Both the easterlies and westerlies are stronger at the higher altitudes than in the lower regions. The meridional wind component [figure 35 (b)] is generally quite light when compared to the zonal component. Overall, the meridional component is mostly southerly at speeds of less than 10 knots.



(a) Zonal Wind Component.

Figure 35. Mean Monthly Wind Components, Point Mugu, California.



(b) Meridional Wind Component

Figure 35 Concluded

A more detailed look at the mean zonal wind speeds during the transition periods is provided by figure 36. Here 5-day mean zonal speeds have been computed for the 30-, 40-, and 50-kilometer zonal components (98,000, 131,000, and 164,000 feet) at Point Mugu. The spring reversal is seen to occur at 50 kilometers very near the end of April, at 40 kilometers some 10 days later, and 5 days after that at 30 kilometers. The process is completed in about 15 days. The fall reversal at 50 kilometers tends to occur near 20 September, at 40 kilometers about 5 days later, and near 1 October at 30 kilometers. This reversal becomes complete in about 12 days.

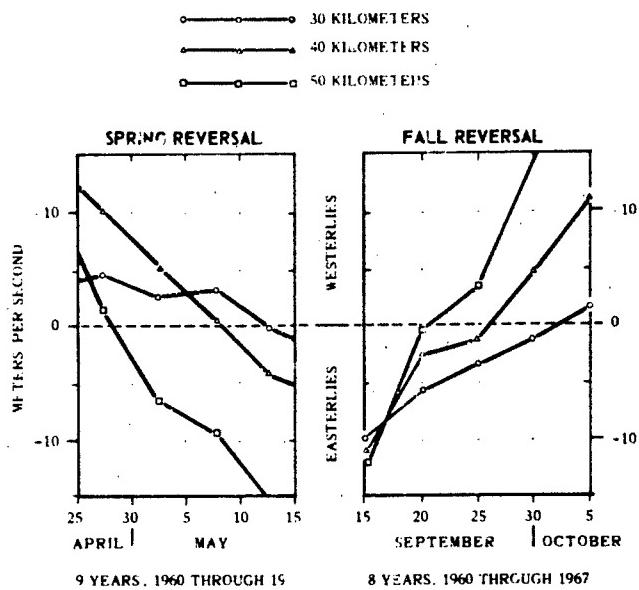


Figure 36. Five-Day Mean Values of Zonal Wind Speed for Altitudes of 30, 40, and 50 Kilometers at the Spring and Fall Transitions.

MEAN TEMPERATURE TIME SECTION

Mean temperature data from tables 183 through 194 are presented in a time section for the altitude range of 30 to 62 kilometers (figure 37). The temperatures are seen to increase with altitude through the upper portions of the stratosphere and are generally warmer at a given altitude in summer than in the other seasons. The stratopause is apparent near 48 kilometers (157,000 feet), above which the temperatures begin a slow increase in the mesosphere. Note that the data from the temperature sensors in the rocketsonde packages used in this period are of somewhat uncertain accuracy at altitudes above about 55 kilometers (180,000 feet) and so caution is advised in applications of data above that altitude.

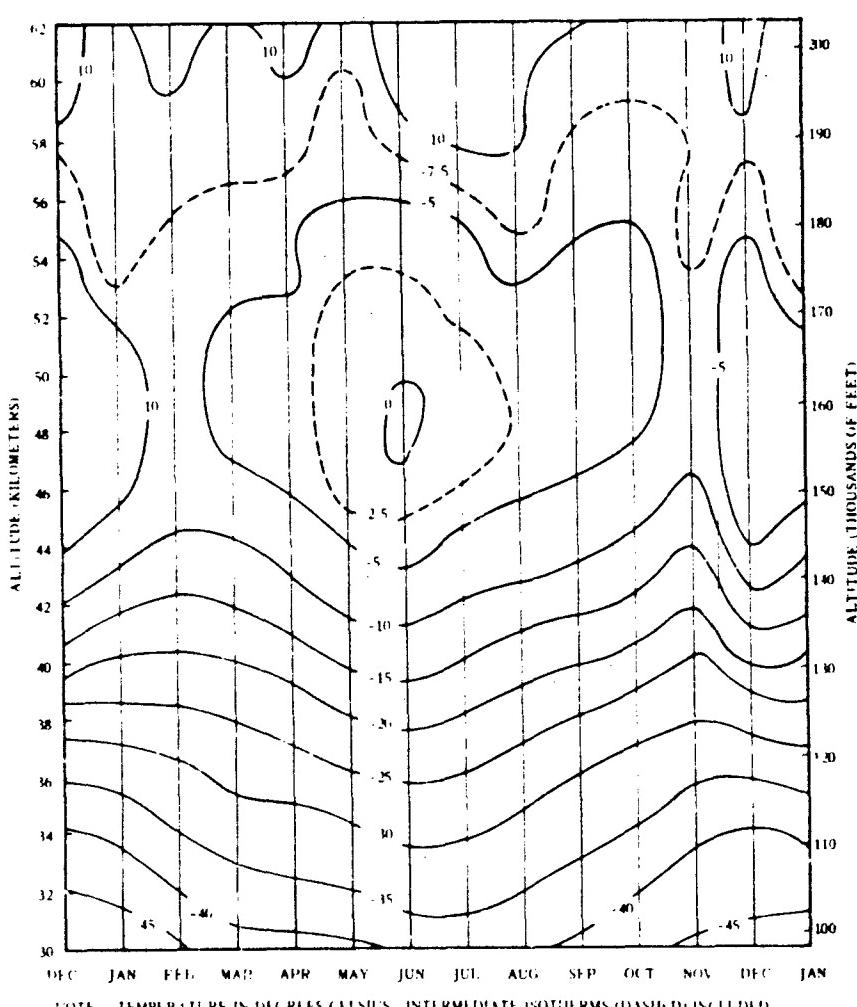


Figure 37. Mean Monthly High-Altitude Temperatures, Point Mugu, California.

MEAN TEMPERATURE PROFILES

The mean January and July temperature data were used in preparing the temperature profiles shown in figure 38. These are compared with both the Standard Atmosphere profile (reference 10) and the appropriate 30° N Supplemental Atmosphere profile (reference 12).

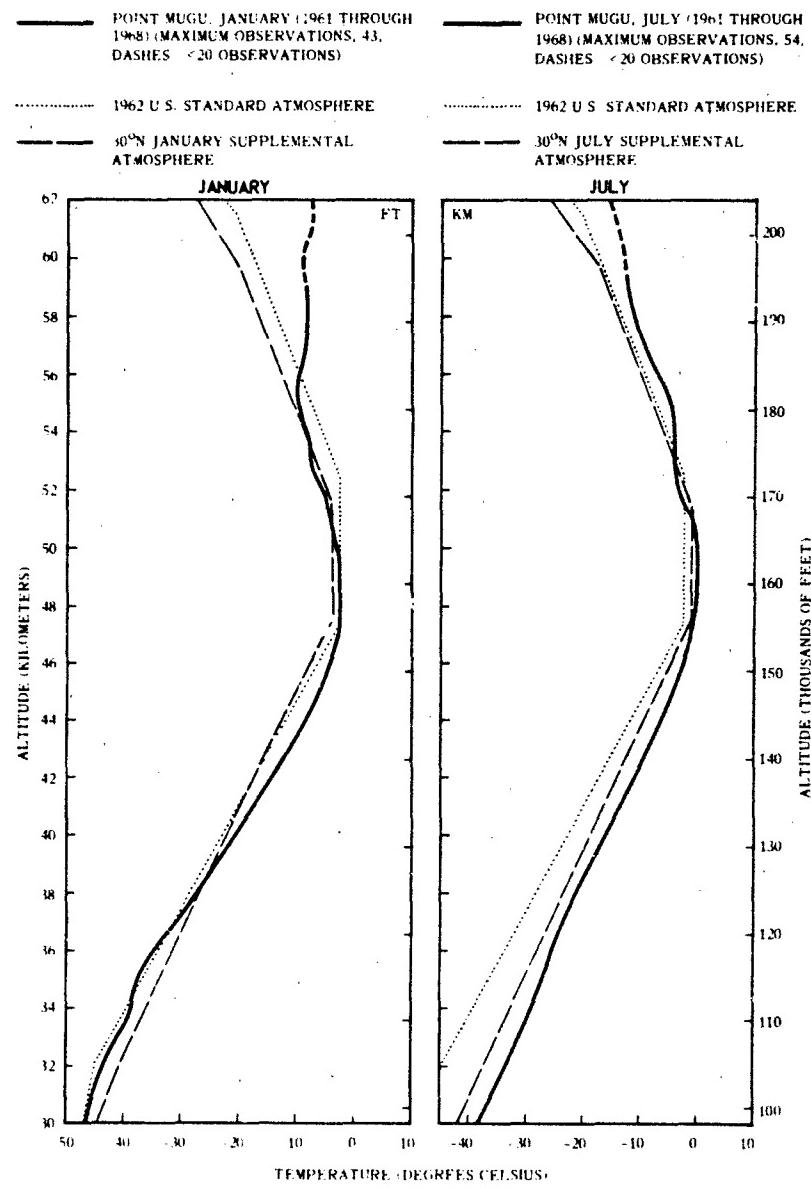


Figure 38. Mean Temperature Profile Comparison, Point Mugu, California.

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APPENDIX A

**A PRELIMINARY SUMMARY OF BALLOON-BORNE
OZONESONDE DATA FOR POINT MUGU**

APPENDIX A

A PRELIMINARY SUMMARY OF BALLOON-BORNE OZONESONDE DATA FOR POINT MUGU

INTRODUCTION

Measurements of atmospheric ozone at Point Mugu were made during three periods between May 1965 and February 1972. In this time span, 108 valid sets of data were obtained, using two different types of balloon-borne sensor. In the first two periods, May to December 1965 and June 1966 to September 1967, the chemiluminescent sensor of Regener (references A-1 and A-2) was used. The electrochemical concentration cell instrument developed by Komhyr (references A-3 and A-4) was used in the third period, April 1970 to February 1972.

The number of soundings by month, year, and type of sonde is given in table A-1. Discussions of the characteristics of the two types of ozonesondes may be found in references A-5, A-6, and A-7. Articles concerning ozone distributions and its variation with altitude, latitude, and season, as well as the role of ozone in the atmosphere are included in references A-8, A-9, and A-10.

Table A-1. Distribution of Ozone Sounding Data by Month at Point Mugu

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	Type of Sonde
1965						3	2		2	6	4	3	20	
1966						4	2	2	4	6	5	6	29	
1967	2	5	5	3	4		4	1					24	Regener
													73	
1970						2	3	2				4	11	
1971	6	4	4	4	2								20	
1972	2	2											4	Komhyr
Totals	1	11	9	9	9	9	4	6	7	12	9	13	108	

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POINT MUGU OZONE DISTRIBUTION CHARACTERISTICS

A number of papers have been written on the vertical distribution of ozone at specific locations (e.g., references A-11, A-12, and A-13) and, in the great majority of these, the area of interest has been the primary ozone maximum that occurs between about 20 and 25 kilometers above the surface. During the series of ozone soundings made at Point Mugu, it was noted that there was often a strong peak at low altitudes, generally below 3 kilometers. As far as is known, this was one of the first series of ozonesonde observations made near a major pollution source. This low-level peak became the subject of a paper by D. A. Lea (reference A-14) which discussed the subtropical inversion as a probable reservoir of ozone generated in the Los Angeles basin.

DATA PRESENTATIONS

These 108 soundings have been summarized by month, season, and year, with values interpolated for each kilometer from the surface to 35 kilometers. The envelope of the monthly profiles of mean ozone pressure is shown in figure A-1.

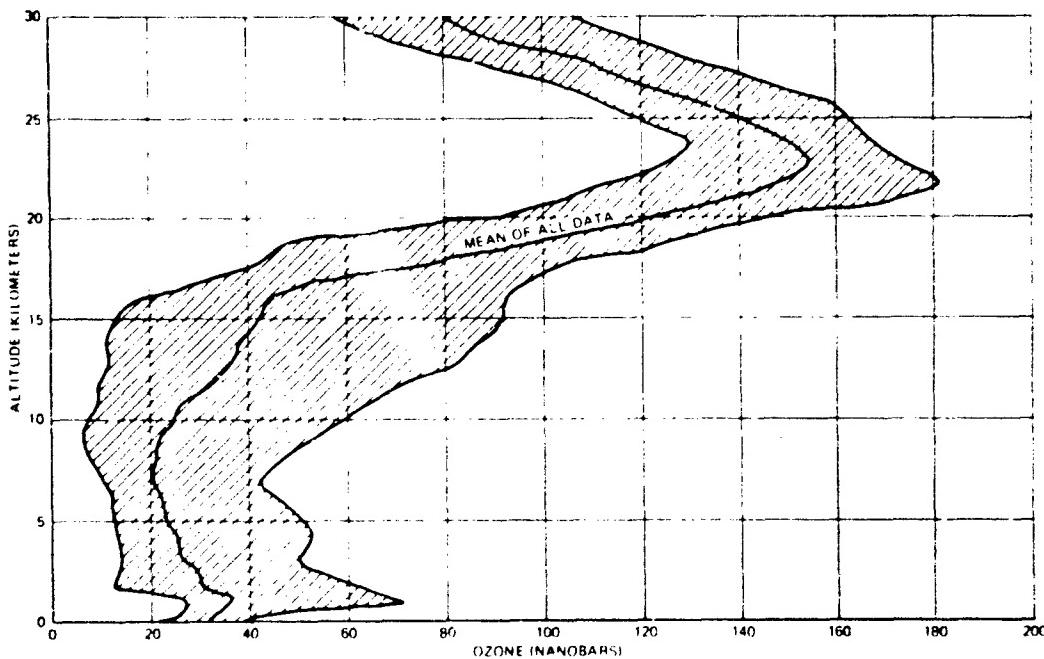


Figure A-1. Envelope of Mean Monthly Ozone Pressures at Point Mugu. Data Interpolated at 1-Kilometer Intervals (108 Soundings)

Figures A-2 and A-3 have been prepared from data interpolated at 250-meter intervals. This interval approximates the height difference between the successive 1-minute readings used as input data points for the original data reduction. The low-level ozone peak is shown in figure A-2 and the major maximum is seen in figure A-3. Table A-2 lists monthly values of ozone pressure density at the level of the principal ozone maximum. In both figures, the outer curves depict the envelope encompassing the extremes of ozone pressure at each level, based on the mean monthly data.

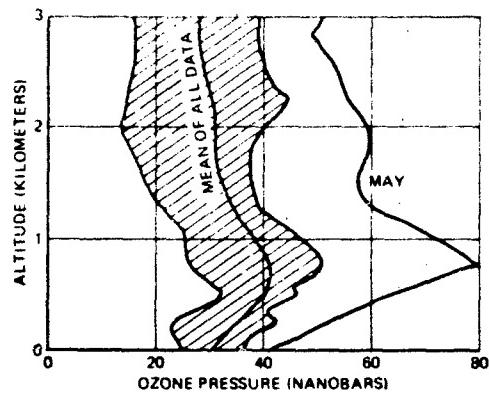


Figure A-2. Envelope of Mean Monthly Ozone Pressure at Low Levels (0 to 3 Kilometers). Data interpolated at 250-meter intervals.

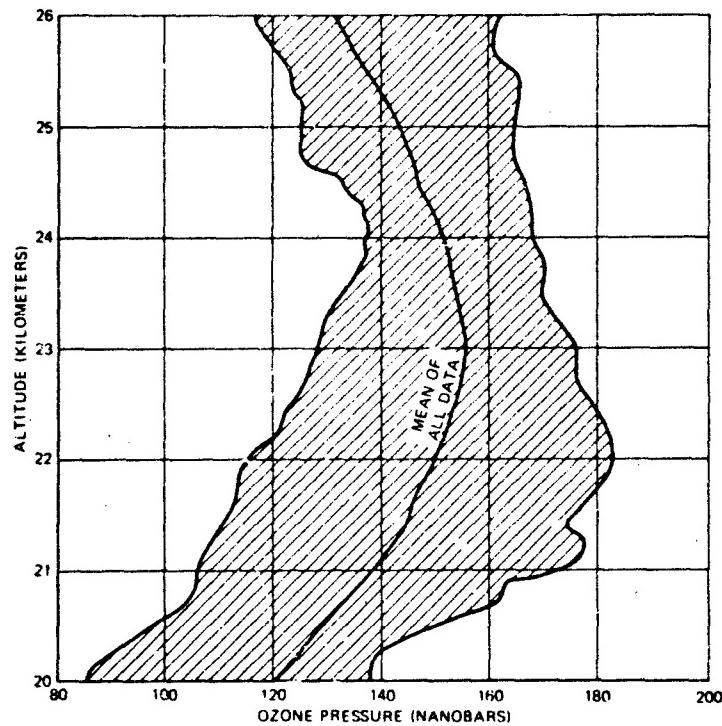


Figure A-3. Envelope of Mean Monthly Ozone Pressure in the Region of Primary Ozone Maximum (20 to 26 Kilometers). Data interpolated at 250-meter intervals.

There is one exception to this, however. The low-level mean ozone pressure for May is far greater than for any other month, and that curve is not contained within the envelope of figure A-2. The nine soundings used in computing the mean data for May have been examined and there is no discrepancy apparent in the data that would cause this extreme. Attempts to ascribe this curve to measurements from a single instrument type failed. There were four soundings from the Regener-sonde and five from the Komhyr-sonde, and high ozone values near the surface were measured by both types of sonde. At the higher levels, the May data falls well in line with the mean curves of other months, so there is no reason to consider this lower data as suspect. Thus, there appears to be a tendency for very high concentrations of ozone to occur within the lowest kilometer of the atmosphere in May at Point Mugu.

Table A-2. Monthly Average Altitude of Principal Ozone Maximum and Ozone Concentrations, Point Mugu

Month	Altitude (Kilometers)	No. OBS.	Ozone Pressure (Nanobars)	Ozone Density (Gamma)
JAN	23.0	10	167.1	448.0
FEB	21.5	11	168.0	452.1
MAR	22.0	9	181.2	486.5
APR	22.5	8	150.1	395.2
MAY	22.0	8	168.1	443.4
JUN	23.8	7	168.4	435.0
JUL	25.0	3	163.7	419.2
AUG	24.5	6	136.6	351.8
SEP	24.8	7	139.1	359.8
OCT	24.0	12	149.1	389.2
NOV	23.3	9	163.1	434.7
DEC	22.5	11	151.2	405.8
All Data	23.0	102	154.4	408.7

Units: Nanobar = Micromillibar

Gamma = Microgram per cubic meter (to convert to other units of density: 1 atm-cm/km = 0.046729 gamma; molecules/cm³ = 0.12547 x 10¹⁷ gamma)

OZONE DENSITY

In figure A-4(a), the overall mean ozone density for Point Mugu is plotted. As a comparison, values of ozone density from the Mid-Latitude Ozone Model (reference A-15) are also plotted. The model provides ozone density values at 2-kilometer intervals, based on means computed over 2-kilometer thick strata. Thus it is more appropriate to plot these latter means as a step-function than to draw a smooth curve through the plotted points.

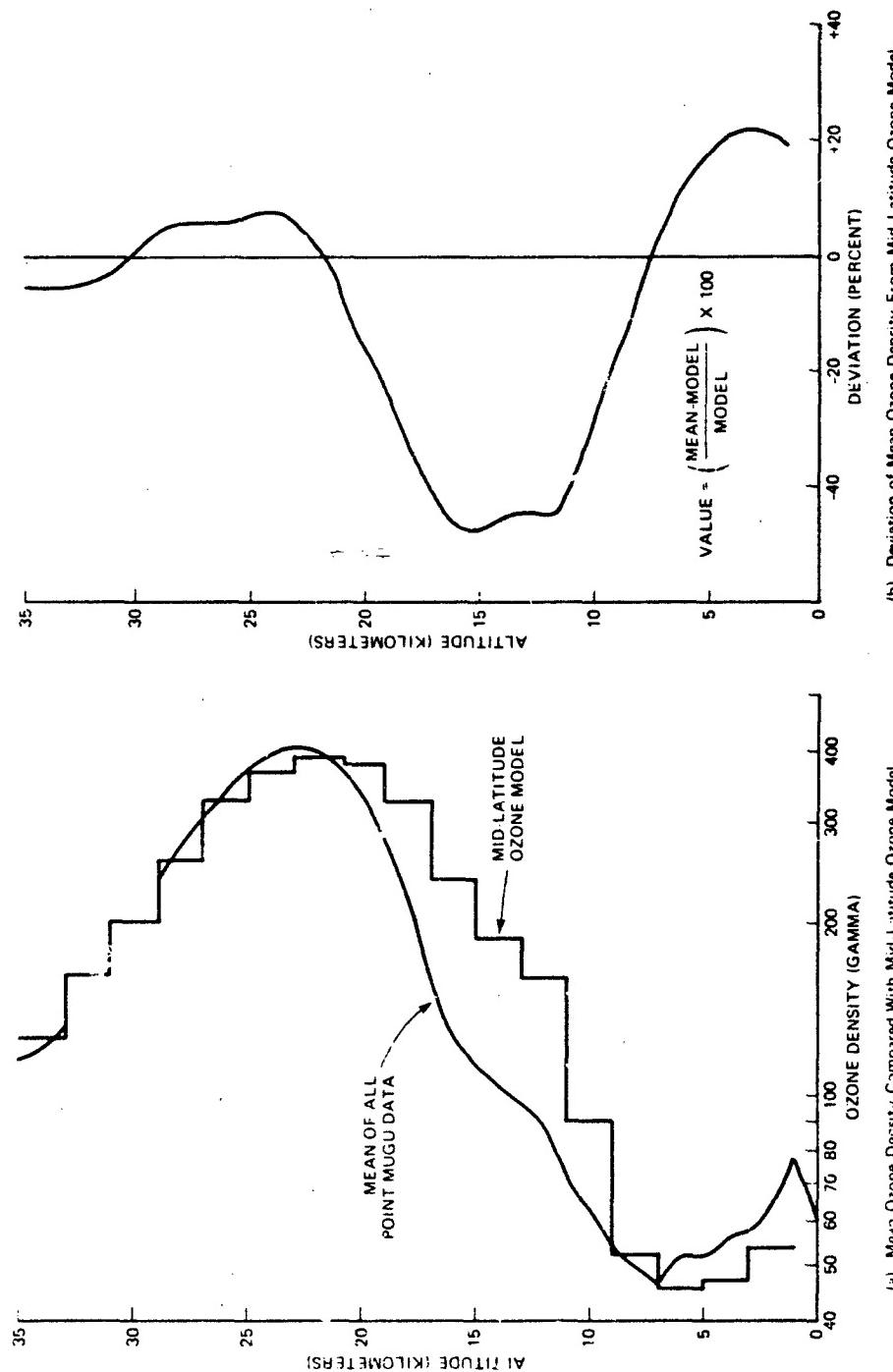


Figure A-4. Mean Ozone Density at Point Mugu, California, and the Mid-Latitude Ozone Model.

The low-level peak in the Point Mugu mean ozone density is a result of the subtropical marine inversion that tends to hold the ozone generated in the Los Angeles area. Subsidence from the eastern edge of the Pacific semipermanent high pressure cell is a possible cause of the continued high values of ozone density through the 7-kilometer level.

The large negative difference of the Point Mugu curve from the values of the model near 15 kilometers is probably a reflection of the greater mean height of the tropopause at this latitude (34° N) than at the latitude the model represents (40° N). Note also that, as a result of this latitude difference, the peak value of ozone density is slightly greater and at a higher altitude in the Point Mugu data than in the model. The difference between the Point Mugu data and the Mid-Latitude Model are shown in terms of percent deviation in figure A-4(b).

Tables A-3 through A-7 list the means of the following items as obtained by ozonesonde observations made at Point Mugu, California: ozone pressure, density, mixing, temperature, dew point, and potential temperature.

Table A-3. Mean Ozone Data for Point Mugu, California: Annual

HT M	OZ NH	OZ DEN GAMMA	OZ MR MIC/G	PRES MB	TEMP K	NO. SOUNDINGS -- 108			NO. OBS
						DEW PT K	POT TAP K	POT TAP K	
4	30.4	60.7	.05	1016.8	288.9	283.1	287.5	102	
1000	38.3	76.9	.07	903.8	267.3	270.3	295.7	106	
2000	31.3	63.9	.06	801.8	263.2	261.9	301.6	106	
3000	27.3	57.1	.06	709.7	277.3	255.6	305.9	106	
4000	25.0	55.5	.07	626.7	271.2	250.5	310.0	107	
5000	23.5	51.5	.07	551.6	264.5	244.9	313.5	107	
6000	23.0	51.7	.08	484.0	257.6	239.1	317.0	107	
7000	20.3	47.0	.08	423.2	250.3	233.5	320.0	108	
8000	21.1	50.3	.09	368.5	242.6	227.7	322.8	108	
9000	21.2	52.3	.11	319.3	234.9	221.9	325.6	107	
10000	22.7	65.4	.16	275.5	227.7	0	329.3	107	
11000	26.8	69.8	.19	236.4	221.6	0	334.7	107	
12000	33.5	88.7	.28	202.4	217.6	0	343.7	107	
13000	37.2	99.2	.36	172.7	215.2	0	355.5	107	
14000	38.5	103.5	.44	147.2	212.9	0	368.2	107	
15000	42.6	115.5	.57	125.2	210.5	0	381.2	107	
16000	44.8	122.5	.71	106.4	209.1	0	396.8	107	
17000	57.1	156.7	1.06	90.3	208.9	0	415.5	107	
18000	79.6	217.9	1.74	76.7	210.0	0	437.5	107	
19000	101.5	276.5	2.60	65.2	211.6	0	461.8	106	
20000	119.8	323.6	3.60	55.5	213.5	0	487.9	105	
21000	137.8	369.8	4.85	47.3	215.0	0	514.3	104	
22000	148.7	396.3	6.13	40.4	216.6	0	542.2	104	
23000	154.4	408.7	7.45	34.5	218.3	0	571.5	102	
24000	150.1	394.1	8.44	29.6	219.8	0	601.7	102	
25000	142.1	370.6	9.33	25.3	221.4	0	633.5	97	
26000	131.5	340.6	10.05	21.8	222.8	0	666.2	95	
27000	119.7	307.6	10.62	18.7	224.5	0	700.9	92	
28000	107.4	274.0	11.06	16.1	226.0	0	737.1	84	
29000	92.7	234.6	11.10	13.8	227.7	0	775.6	74	
30000	81.7	205.0	11.39	11.9	229.5	0	816.4	67	
31000	70.7	176.0	11.49	10.2	231.4	0	860.2	55	
32000	63.0	155.1	11.85	8.8	234.0	0	907.0	46	
33000	54.4	133.3	11.90	7.6	235.3	0	951.4	31	
34000	49.6	120.4	12.56	6.5	237.3	0	1000.9	22	
35000	47.4	114.6	13.86	5.0	238.2	0	1047.4	15	

Table A-4. Mean Ozone Data for Point Mugu, California: Winter

H H	O ₂ PMS NE	O ₂ DE ₄ GAMMA	O ₂ MR MICC/G	PRESS MB	TEMP K	NO. SOUNDINGS -- 34			NO. OBS
						DEW PT K	POT TMP K	NO. OBS	
31.0	61.8	.05	1019.1	288.0	281.1	286.4	33		
1000	33.2	.67	905.2	28.5	265.2	292.7	34		
2000	29.9	.61	801.8	279.4	258.3	297.6	34		
3000	26.6	.56	708.6	273.9	253.0	302.3	34		
4000	26.2	.56	625.0	268.3	246.8	307.0	34		
5000	23.8	.52	549.4	261.8	239.7	310.7	34		
6000	21.4	.48	481.5	254.7	235.1	314.0	34		
7000	20.6	.48	420.4	247.2	230.0	316.4	34		
8000	19.2	.46	365.5	239.3	224.3	319.2	34		
9000	16.4	.45	316.0	231.4	0	321.7	34		
10000	22.2	.57	272.1	223.9	0	325.0	34		
11000	22.8	.60	232.8	218.0	0	330.9	34		
12000	31.8	.84	198.8	215.6	0	342.2	34		
13000	35.3	.94	169.5	214.6	0	356.5	34		
14000	37.8	1.01	144.5	213.1	0	370.6	34		
15000	44.2	1.19	60.0	211.0	0	384.2	34		
16000	45.2	1.23	72.1	209.3	0	399.4	34		
17000	58.3	1.60	110.0	206.5	0	416.9	34		
18000	82.4	2.26	1.82	75.3	209.1	0	438.1	34	
19000	110.2	3.02	2.87	64.0	210.0	0	461.0	33	
20000	120.5	3.44	3.87	54.4	211.6	0	486.5	33	
21000	145.1	3.92	5.22	46.3	213.1	0	512.9	33	
22000	152.9	4.11	6.45	39.5	214.5	0	540.4	33	
23000	160.7	4.29	7.94	33.7	215.9	0	569.2	32	
24000	147.2	3.90	6.49	28.8	217.2	0	595.1	32	
25000	134.4	3.55	9.06	24.7	218.5	0	639.6	30	
26000	119.7	3.15	9.44	21.1	219.1	0	661.2	28	
27000	106.9	2.80	9.82	18.0	220.0	0	694.2	27	
28000	92.5	2.40	9.89	15.5	222.0	0	732.1	26	
29000	76.0	1.95	9.46	13.3	224.0	0	772.1	25	
30000	66.6	1.70	9.72	11.4	225.5	0	812.3	23	
31000	57.0	1.44	9.68	9.8	227.2	0	854.4	22	
32000	54.2	1.36	10.73	8.4	229.7	0	902.1	18	
33000	46.4	1.15	10.59	7.3	232.0	0	949.8	11	
34000	42.6	1.04	11.22	6.3	234.2	0	999.6	9	
35000	41.6	1.01	12.03	5.4	235.3	0	1045.4	7	

Table A-5. Mean Ozone Data for Point Mugu, California: Spring

HT M	OZ NB	OZ PRS	DEN GAMMA	OZ MR MIC/G	PRES MH	TEMP K	NO. SOUNDINGS -- 27			NO. OBS
							DEW PT K	POT TMP K	NO. OBS	
4	34.6	69.3	.06	1016.9	287.3	282.3	285.9	27		
1000	48.8	99.1	.09	902.5	282.8	271.0	291.2	27		
2000	45.2	92.8	.09	799.2	279.8	259.6	298.3	27		
3000	40.1	84.5	.09	706.3	273.9	252.6	302.5	27		
4000	39.8	85.6	.11	622.7	268.0	247.3	306.9	27		
5000	36.1	79.7	.11	547.4	261.0	243.3	310.3	27		
6000	36.1	81.9	.12	479.5	254.6	237.9	314.2	27		
7000	31.6	73.7	.13	418.7	247.0	230.6	317.0	27		
8000	37.8	91.1	.17	364.1	239.5	223.3	279.8	27		
9000	42.0	104.2	.23	314.6	232.1	0	323.2	26		
10000	52.0	132.7	.32	271.0	225.5	0	327.7	26		
11000	56.0	146.5	.41	232.3	220.0	0	334.0	26		
12000	68.8	181.9	.58	198.7	216.0	0	364.4	26		
13000	74.5	198.1	.73	169.5	216.1	0	359.1	26		
14000	74.1	198.3	.86	144.7	215.2	0	374.1	26		
15000	80.5	217.2	1.10	123.4	213.5	0	388.4	26		
16000	77.6	209.8	1.23	105.1	212.6	0	405.1	26		
17000	77.0	209.5	1.43	89.4	211.7	0	422.3	26		
18000	99.1	268.6	2.18	76.1	212.1	0	443.1	26		
19000	117.9	319.0	3.04	64.9	212.8	0	465.5	26		
20000	131.2	352.3	3.97	55.3	214.5	0	491.1	26		
21000	154.0	412.0	5.46	47.1	215.6	0	516.6	26		
22000	165.2	439.0	6.83	40.2	217.2	0	544.3	26		
23000	160.4	423.6	7.77	34.4	218.7	0	573.4	25		
24000	156.3	409.5	8.85	29.5	220.4	0	604.1	25		
25000	146.2	380.0	9.66	25.3	222.1	0	636.6	25		
26000	135.5	349.4	10.42	21.8	223.8	0	670.1	25		
27000	124.8	318.7	11.12	18.7	225.9	0	706.5	25		
28000	116.7	296.0	12.07	16.4	227.5	0	742.8	21		
29000	103.2	259.8	12.42	13.9	229.3	0	781.5	19		
30000	93.7	233.6	13.05	11.9	231.7	0	823.6	19		
31000	85.6	210.8	13.84	10.3	235.9	0	871.8	14		
32000	75.9	183.9	14.10	9.0	238.9	0	922.9	12		
33000	75.2	182.2	16.22	7.7	241.3	0	974.1	7		
34000	66.2	157.1	16.50	6.6	243.3	0	1023.7	6		
35000	64.8	152.3	18.52	5.8	245.8	0	1077.2	4		

Table A-6. Mean Ozone Data for Point Mugu, California. Summer

HT M	OZ PRS NB	OZ OEN GAMMA	OZ MR MIC/G	NO. SOUNDINGS -- 19			
				PRES MB	TEMP K	DEW PT K	POT TMP K
26.7	53.0	.04	1013.0	290.8	286.9	289.8	17
35.7	69.9	.06	902.2	293.9	277.8	302.7	18
20.0	60.2	.06	803.1	291.0	271.0	309.9	18
25.3	51.4	.06	713.2	284.1	264.4	312.9	18
30.0	22.3	.06	631.3	276.7	259.6	315.6	18
40.0	20.6	.06	557.2	269.6	252.6	318.7	18
50.0	20.9	.07	490.0	262.9	244.0	322.4	18
60.0	45.7	.07	429.4	255.7	237.9	325.6	19
70.0	39.5	.06	374.8	248.6	232.8	329.1	19
80.0	16.6	.07	325.9	241.1	226.6	332.1	19
90.0	15.4	.08	282.2	233.7	222.7	335.5	19
100.0	19.0	.11	243.4	227.2	227.2	340.3	19
110.0	17.2	.11	209.0	221.4	221.4	346.4	19
120.0	18.7	.15	178.7	216.2	211.8	353.7	19
130.0	22.8	.24	152.3	211.8	206.6	362.8	19
140.0	25.0	.27	129.3	208.1	208.1	373.4	19
150.0	26.0	.33	109.7	206.7	206.7	388.8	19
160.0	31.4	.48	92.9	207.9	207.9	410.0	19
170.0	47.5	.85	78.9	210.5	210.5	435.1	19
180.0	69.9	1.48	67.2	213.2	213.2	461.3	19
190.0	85.0	2.10	57.3	215.9	215.9	489.0	18
200.0	108.9	291.0	41.17	217.9	217.9	516.1	17
210.0	122.8	325.3	5.34	219.4	219.4	543.6	17
220.0	134.5	353.6	41.8	221.6	221.6	573.8	17
230.0	144.4	376.0	6.70	223.7	223.7	605.5	17
240.0	148.5	383.1	8.04	225.2	225.2	636.7	15
250.0	149.8	383.8	9.43	226.9	226.9	669.7	15
260.0	144.3	366.8	10.56	228.1	228.1	702.9	15
270.0	134.3	339.9	11.42	229.7	229.7	730.7	15
280.0	119.3	299.9	11.78	231.0	231.0	775.0	13
290.0	107.1	267.8	12.27	14.5	14.5	816.7	12
300.0	94.4	233.4	12.51	12.5	12.5	861.7	9
310.0	81.3	198.7	12.44	10.8	10.8	901.5	8
320.0	70.5	171.7	12.49	9.4	9.4	933.2	4
330.0	51.4	125.9	10.46	8.1	8.1	969.3	2
340.0	49.2	121.5	11.76	7.0	7.0	1017.6	2
350.0	43.0	105.5	11.90	6.0	6.0		

Table A-7. Mean Ozone Data for Point Mugu, California: Autumn

HT H	OZ PRS NB	OZ DEN GAMMA	OZ MR MICGS	NO. SOUNDINGS -- 26				NO. OBS
				PRES MB	TEMP K	DEW PT K	POT TMP K	
4	27.8	55.0	.04	1016.0	290.4	284.0	289.1	25
1000	36.1	71.5	.06	904.5	290.8	271.5	299.3	27
2000	19.9	40.1	.04	803.6	286.1	262.7	304.5	27
3000	16.8	34.6	.04	712.3	280.6	256.6	309.1	27
4000	14.8	31.2	.04	629.6	274.2	252.4	312.9	28
5000	12.9	28.0	.04	554.9	267.6	248.4	316.6	28
6000	13.5	30.1	.04	487.5	260.7	242.4	320.1	28
7000	10.8	24.7	.04	426.8	253.4	237.5	323.1	28
8000	10.2	24.0	.04	372.1	245.5	232.3	325.6	28
9000	9.1	22.3	.04	323.0	237.6	226.3	326.2	28
10000	10.0	25.3	.06	279.1	230.3	0	331.6	28
11000	10.9	28.0	.07	240.0	223.7	0	336.3	28
12000	12.9	34.2	.10	205.5	218.3	0	343.0	28
13000	14.6	39.2	.14	175.5	214.2	0	352.2	28
14000	15.3	41.6	.17	149.4	211.2	0	363.7	28
15000	16.7	45.8	.22	126.9	208.6	0	376.3	28
16000	23.2	64.1	.36	107.7	207.0	0	391.5	28
17000	43.7	120.8	.80	91.3	207.6	0	411.5	28
18000	64.7	178.7	1.39	77.4	206.5	0	433.2	28
19000	87.3	238.6	2.21	65.8	211.1	0	459.5	28
20000	108.4	293.5	3.21	56.0	213.3	0	486.0	28
21000	123.2	331.0	4.28	47.7	215.0	0	512.8	28
22000	137.2	365.3	5.59	40.7	217.0	0	541.5	28
23000	148.0	391.1	7.03	34.8	218.7	0	570.9	28
24000	148.7	390.5	8.28	29.8	219.9	0	600.2	28
25000	142.7	371.9	9.26	25.5	221.7	0	632.1	27
26000	133.1	343.8	10.07	21.9	223.5	0	666.0	27
27000	119.6	306.1	10.50	18.9	225.6	0	701.5	25
28000	108.1	274.7	11.01	16.2	226.9	0	736.6	22
29000	94.4	238.1	11.15	14.0	228.9	0	774.6	17
30000	79.1	198.6	10.88	12.0	229.9	0	813.1	13
31000	70.3	175.6	11.30	10.3	231.3	0	855.1	10
32000	55.7	138.0	10.36	8.8	233.2	0	899.8	8
33000	51.1	125.6	10.85	7.8	235.2	0	941.0	6
34000	42.7	104.4	10.54	6.7	236.8	0	988.7	5
35000	37.8	92.9	10.80	5.7	235.4	0	1024.2	2

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APPENDIX B

**A PRELIMINARY SUMMARY OF FALLING SPHERE-MEASURED WIND
AND THERMODYNAMIC DATA FROM VIPER METEOROLOGICAL
ROCKET FIRINGS AT POINT MUGU**

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A PRELIMINARY SUMMARY OF FALLING SPHERE-MEASURED WIND AND THERMODYNAMIC DATA FROM VIPER METEOROLOGICAL ROCKET FIRINGS AT POINT MUGU

INTRODUCTION

From the autumn of 1969 through mid-1972, 45 Viper rocket firings at Point Mugu produced usable meteorological data at altitudes between 35 and 90 kilometers. These data have been summarized seasonally and are presented here as preliminary information only. The Viper rocket was supplanted in mid-1972 by the Super Loki system. As the volume of data from this system accrues and as techniques become available to improve the accuracy and reliability of all these high-altitude data, additional and updated summaries will be prepared.

The payload of the Viper rocket is a Dart containing a collapsed 1-meter-diameter mylar sphere (ML-568/AM Robin). The Dart carries this sphere to altitudes of around 120 kilometers (km), at which level the sphere is ejected and inflated by a small amount of gas carried in a capsule within the sphere. Wind data are calculated from the radar track of the falling Robin, while thermodynamic data -density, temperature and pressure- are derived from the Robin's rate of fall. Although the wind data may in some instances be valid though the sphere was not fully inflated, the thermodynamic data are not considered valid if there are indications that the sphere had collapsed or was leaking. In such instances, the thermodynamic data are discarded. Discussions of the Viper-Dart and Robin systems and some of their limitations and problems may be found in publications such as references B-1 through B-5.

FIRINGS

Of the 45 firings that provided usable wind data, 18 also provided usable thermodynamic data. In this presentation, wind data are included from 85 km downward and thermodynamic data from 90 km. The data presentations are terminated at 35 km.

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Because there are two main seasons in the wind regime at high altitudes with two minor transition periods between, the individual soundings were examined to determine the temporal extent of the "winter" westerlies and the "summer" easterlies at these heights. The resulting distribution of the soundings is given in table B-1. Table B-2 describes the items listed at each kilometer in tables B-3 through B-6 for each season, the transition, and the combined data.

Table B-1. Distribution of Viper Soundings by Season at Point Mugu

Season	Period	Number Sets of Data	
		Wind	Thermodynamic
Winter	Late September to mid-April	22	8
Summer	Late April to early September	20	10
Transition Soundings	Two in April; One in September	3	0

Table B-2. Items Included in Data Summaries

Wind Data (all speed values in knots, directions in degrees True)	
U(W) and V(S)	The U (east-west) and V (north-south) components of the mean resultant wind vector. The West and South components have the positive sign.
RS	Magnitude of the mean resultant wind vector
RD	Direction of the mean resultant wind vector
WS	Mean scalar wind speed (wind speed without regard to wind direction.)
NW	Number of observations used for the computations at that level
Thermodynamic data	
TK	Mean temperature, Kelvin
*PMB	Mean atmospheric pressure, millibars
*DGM3	Mean density, grams per cubic meter
NT	Number of observations used for the computations at that level

*Although listed to five decimal places, the data should be considered good to only three significant figures.

Graphical presentations of the data for the winter and summer seasons and for the totality of the data are seen in figures B-1 through B-3. In these, the resultant wind speed and direction (RS and RD) are plotted together with the mean scalar wind speed (WS) to provide an indicator of the variability of the wind. (The closer the curves for RS and WS, the greater the constancy of the wind from the resultant direction, RD.) The mean temperature (TK) is plotted in conjunction with a "reference" temperature profile appropriate to the season concerned.

DISCUSSION OF THE DATA

In the region between about 66 and 72 km, there appears to be a "discontinuity" in the wind speed data. This is seen in the profiles as a small, sudden decrease in the wind speed. A similar "jump" appears in the temperature and density data as well. It has been indicated by Masterson, et al (reference B-6), that this may not be real, but rather may have been induced in the data as a reflection of our imperfect knowledge of the dynamics of a falling sphere as it decelerates through the transonic speed range. The Robin sphere is falling at approximately Mach 3 shortly after its ejection from the Dart at about 129 km, and the deceleration to a subsonic fall rate usually occurs near 70 km. It would appear that a smooth curve drawn through this stratum between "good" data above and below might better represent the mean wind and thermodynamic data at these altitudes.

WINTER

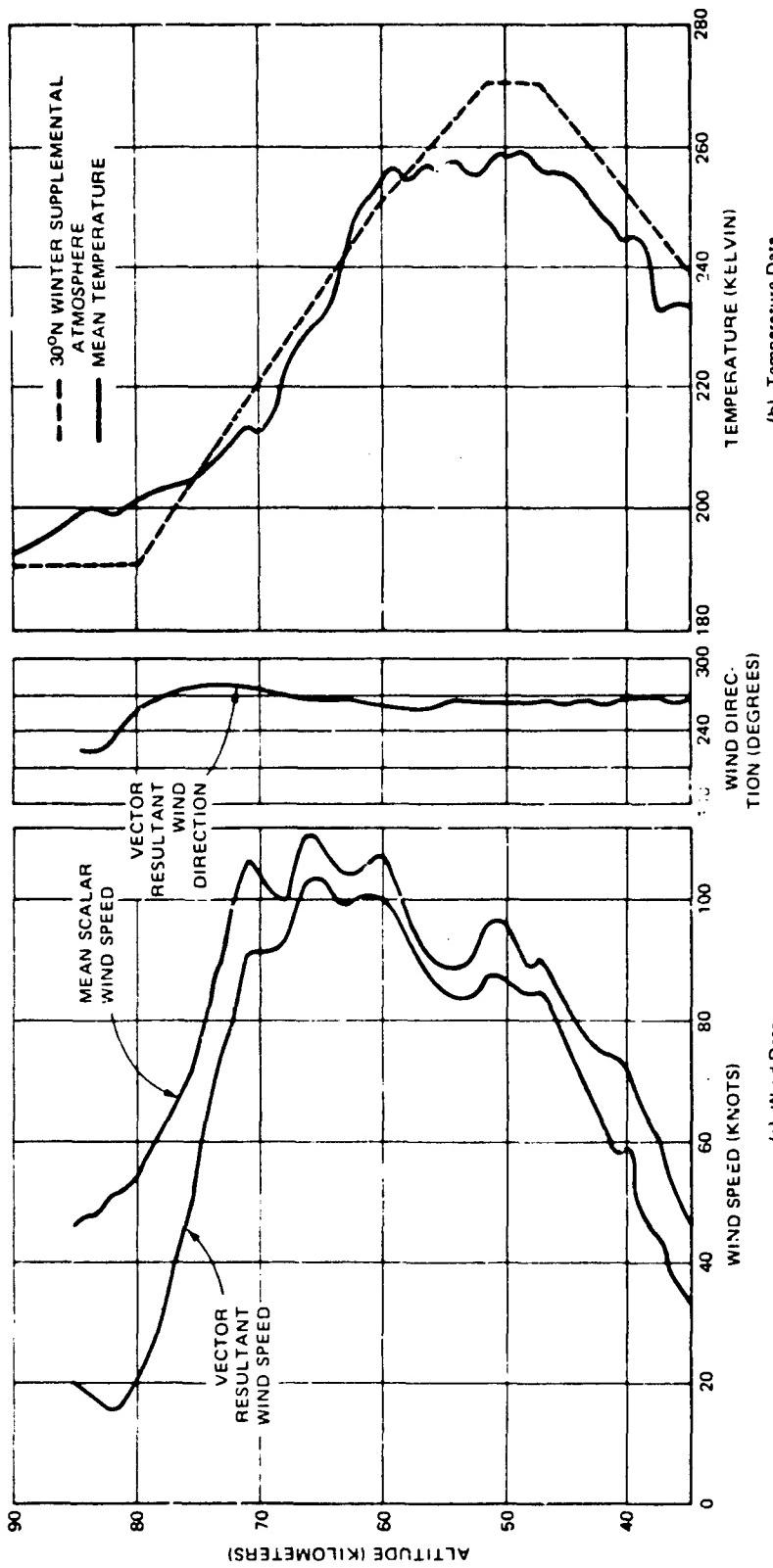
In the winter season (table B-3 and figure B-1), resultant wind directions are generally westerly with an indication of southwesterlies in the upper few kilometers. From mean resultant speeds of less than 40 knots in the lowest levels, the speeds increase to over 100 knots in the region of 60 to 67 km before decreasing to less than 20 knots above 80 km. The mean scalar speed is, of course, greater than the resultant speed and in the winter profile can be seen to follow a pattern similar to that of the resultant speed. At most levels in this profile, there is a moderate degree of constancy of the wind direction, but the variability increases in the upper levels.

The mean temperature profile for winter is plotted in comparison with the January 30° North Supplemental Atmosphere profile (reference B-7). Although the mean curve is based on only eight valid sets of data, it lies quite close to the reference curve through the 55-to-77-km range.

Table B-3. Viper Rocket Summary Data for Point Mugu, California: Winter
(Late September Through Mid-April).

KM	U(W)	V(S)	RS	RU	WS	NW	TK	PMB	DGM3	NT
90	0	0	0	0	0	0	193	.00186	.00335	5
89	0	0	0	0	0	0	194	.00221	.00395	6
88	0	0	0	0	0	0	195	.00262	.00466	6
87	0	0	0	0	0	0	196	.00310	.00549	6
86	0	0	0	0	0	0	197	.00367	.00644	6
85	14.4	14.7	20.5	224	46	17	199	.00430	.00752	7
84	12.1	14.2	18.6	221	48	17	200	.00503	.00884	7
83	11.6	13.3	17.6	221	49	17	200	.00599	.01040	7
82	13.6	8.2	15.9	239	51	18	199	.00700	.01224	8
81	16.1	6.6	17.4	248	52	18	200	.00827	.01438	8
80	19.9	4.9	20.5	256	54	18	202	.00976	.01685	8
79	25.1	2.9	25.3	263	57	18	203	.01150	.01978	8
78	31.5	.5	31.5	269	61	18	203	.01355	.02328	8
77	38.8	-1.4	38.8	272	65	18	204	.01597	.02741	8
76	46.8	-3.3	46.9	274	70	18	204	.01881	.03224	8
75	56.6	-6.0	56.9	276	76	19	205	.02215	.03774	8
74	65.3	-8.6	65.9	278	84	19	207	.02605	.04398	8
73	73.0	-11.0	73.9	279	93	19	209	.03059	.05116	8
72	80.4	-12.5	81.3	279	100	19	211	.03587	.05936	8
71	89.2	-13.0	90.1	278	107	20	213	.04198	.06862	8
70	91.4	-11.2	92.0	277	105	20	212	.04912	.08099	8
69	91.7	-7.2	91.9	275	101	20	213	.05749	.09356	8
68	93.4	-2.8	93.4	272	100	20	220	.06701	.10547	8
67	100.5	2.6	100.5	269	107	21	225	.07780	.12017	8
66	103.7	2.6	103.7	269	111	21	228	.09012	.13741	8
65	103.7	2.5	103.7	269	110	21	230	.10424	.15705	8
64	99.8	3.9	99.9	268	105	21	237	.12018	.17579	8
63	98.8	5.3	99.0	267	104	21	242	.13807	.19762	8
62	100.0	8.0	100.3	265	105	21	248	.15814	.22104	8
61	99.8	14.8	100.8	262	106	21	251	.18068	.24943	8
60	99.4	19.0	101.2	259	108	22	253	.20626	.28332	8
59	95.8	21.6	98.1	257	104	22	257	.23506	.31761	8
58	91.5	19.5	93.6	258	98	22	254	.26776	.36585	8
57	87.7	16.4	89.2	259	93	22	255	.30524	.41486	8
56	86.0	12.1	86.9	262	91	22	257	.34771	.47026	8
55	84.6	8.3	85.0	264	89	21	256	.39610	.53769	8
54	82.5	10.4	83.2	263	88	21	257	.45106	.60938	8
53	82.3	10.5	82.9	263	90	21	255	.51391	.69998	8
52	84.8	10.0	85.4	263	92	22	255	.58630	.79838	8
51	87.1	10.4	87.8	263	96	22	257	.66743	.90114	8
50	86.5	13.1	87.5	261	96	22	259	.76015	1.01879	8
49	84.3	10.6	84.9	263	92	22	258	.86491	1.16275	8
48	83.1	12.0	84.0	262	89	22	259	.98515	1.32149	8
47	84.0	8.3	84.4	264	90	22	256	1.12133	1.51942	8
46	80.3	7.5	80.7	265	86	22	256	1.27746	1.73363	8
45	76.1	7.9	76.5	264	82	22	256	1.45616	1.97755	8
44	71.4	5.8	71.6	265	79	22	254	1.66090	2.26945	8
43	68.5	6.7	68.9	264	76	22	252	1.89602	2.61469	8
42	63.2	8.9	63.8	262	74	22	248	2.16716	3.02944	8
41	57.9	3.5	58.0	267	74	22	247	2.48336	3.48597	8
40	58.6	2.7	58.7	267	73	22	244	2.84597	4.04763	8
39	47.2	1.7	47.2	268	65	21	246	3.26625	4.61032	8
38	45.6	.5	45.6	269	63	21	241	3.75225	5.41300	8
37	42.5	2.2	42.6	267	58	21	232	4.32310	6.47306	8
36	36.0	4.8	36.3	262	50	21	234	4.92799	7.31683	6
35	34.1	2.5	34.2	266	47	21	233	5.69093	8.47401	6

NOTE: PROFILES BASED ON A MAXIMUM OF 22 WIND AND 8 TEMPERATURE SOUNDINGS BETWEEN LATE SEPTEMBER AND MID-APRIL.



(a) Wind Data.
(b) Temperature Data.

Figure B-1. Falling-Sphere-Measured High-Altitude Winds and Temperatures at Point Mugu, California: Winter.

SUMMER

The summer season easterlies (table B-4 and figure B-2) are readily apparent in the plot of resultant wind directions, with the wind showing a steady easterly direction at all altitudes. The mean wind speeds of summer are lower than in winter at all levels except the very top, and only the mean scalar speed exceeds even 90 knots. The constancy of the wind is much greater in summer than in winter up through about 66 km; above that height the variability increases greatly.

The July 30° North Supplemental Atmosphere temperature profile (reference B-7) is plotted as a comparison for the mean temperature values computed from the ten sets of thermodynamic data for this season. As in the winter temperature profile, there is generally greater agreement in those regions with a definite lapse rate than in the two isothermal regions.

Table B-4. Viper Rocket Summary Data for Point Mugu, California: Summer
(Late April Through Early September).

KM	U(W)	V(S)	HS	RD	WS	NW	TK	PMB	NGM3	NT
90	0	0	0	0	0	0	191	.00178	.00323	9
89	0	0	0	0	0	0	189	.00212	.00384	9
88	0	0	0	0	0	0	187	.00253	.00467	9
87	0	0	0	0	0	0	187	.00301	.00558	9
86	0	0	0	0	0	0	188	.00359	.00664	9
85	-6.1	3.2	7.6	115	33	18	189	.00428	.00788	9
84	-12.8	2.0	13.0	99	34	18	189	.00510	.00935	9
83	-17.9	.7	17.9	92	35	18	189	.00607	.01113	9
82	-21.6	-0.7	21.6	88	38	18	189	.00723	.01324	9
81	-24.5	-2.0	24.6	85	41	18	190	.00861	.01570	9
80	-26.5	-3.5	26.7	83	45	18	191	.01024	.01857	9
79	-27.4	-4.7	27.8	80	49	18	192	.01217	.02199	9
78	-28.0	-5.8	28.6	78	51	18	192	.01446	.02606	9
77	-27.9	-6.3	28.6	77	53	18	193	.01717	.03093	9
76	-27.0	-5.8	27.6	78	54	18	195	.02044	.03645	9
75	-26.1	-3.9	26.4	82	53	18	198	.02440	.04268	9
74	-25.6	.4	25.6	91	51	18	201	.02906	.05004	9
73	-26.9	7.7	28.0	106	52	18	202	.03430	.05892	9
72	-30.7	14.6	34.0	116	58	18	203	.04040	.06890	9
71	-35.2	16.5	38.8	115	62	18	202	.04756	.08162	9
70	-39.9	12.4	41.7	107	65	18	201	.05612	.09678	9
69	-43.6	8.7	44.5	101	64	18	212	.06592	.10781	9
68	-46.5	10.3	47.6	102	62	18	218	.07689	.12246	9
67	-47.8	14.9	50.1	107	61	18	218	.08954	.14229	9
66	-55.9	18.9	59.0	109	65	19	224	.10411	.16121	9
65	-68.1	16.6	70.1	104	76	19	233	.12041	.17889	9
64	-79.8	8.8	80.2	96	89	18	238	.13763	.20126	8
63	-83.5	7.5	83.8	95	89	18	243	.15812	.22596	8
62	-87.2	8.3	87.6	95	90	17	246	.18120	.25520	8
61	-88.0	9.1	88.5	96	92	17	251	.20717	.28633	8
60	-87.5	12.8	88.4	98	95	17	254	.23634	.32287	8
59	-87.0	10.4	87.6	97	95	18	256	.26914	.36496	9
58	-79.5	5.5	79.7	94	86	19	258	.30764	.41431	10
57	-76.6	10.7	77.4	98	80	19	258	.35031	.47158	10
56	-74.7	14.8	76.2	101	78	19	259	.39870	.53371	10
55	-71.1	17.4	73.2	104	75	20	257	.45364	.61399	10
54	-71.4	16.5	73.3	103	76	20	262	.51542	.68269	10
53	-75.7	17.7	77.8	103	80	20	263	.58565	.77363	10
52	-80.2	12.4	81.2	99	83	20	263	.56529	.87830	10
51	-76.5	7.2	76.8	95	79	20	262	.75540	.99973	10
50	-73.0	8.2	73.4	96	76	20	262	.85824	1.13857	10
49	-72.3	7.4	72.7	93	75	20	261	.97640	1.29920	10
48	-71.2	2.5	71.2	92	73	20	262	1.11070	1.47326	10
47	-65.2	4.7	65.3	94	67	20	260	1.26385	1.68977	10
46	-57.8	4.9	58.0	95	60	20	260	1.43788	1.92348	10
45	-60.0	7.6	60.5	97	63	20	261	1.63526	2.18041	10
44	-56.6	5.1	56.8	95	60	20	262	1.86010	2.46306	10
43	-52.1	-1.9	52.2	88	56	20	259	2.11565	2.83571	10
42	-50.9	1.7	50.9	92	53	20	259	2.40861	3.22546	10
41	-44.5	4.2	44.7	95	49	20	256	2.74561	3.72241	10
40	-44.4	1.6	44.4	92	48	20	251	3.13415	4.34597	10
39	-41.5	.3	41.5	90	47	20	249	3.58766	4.99856	10
38	-35.1	-0.4	35.1	89	45	20	248	4.10912	5.75840	10
37	-32.6	-0.7	32.6	89	43	20	242	4.72761	6.78134	9
36	-32.2	1.9	32.3	93	41	20	239	5.43750	7.88837	9
35	-30.8	2.6	31.0	95	37	20	236	6.26730	9.21250	9

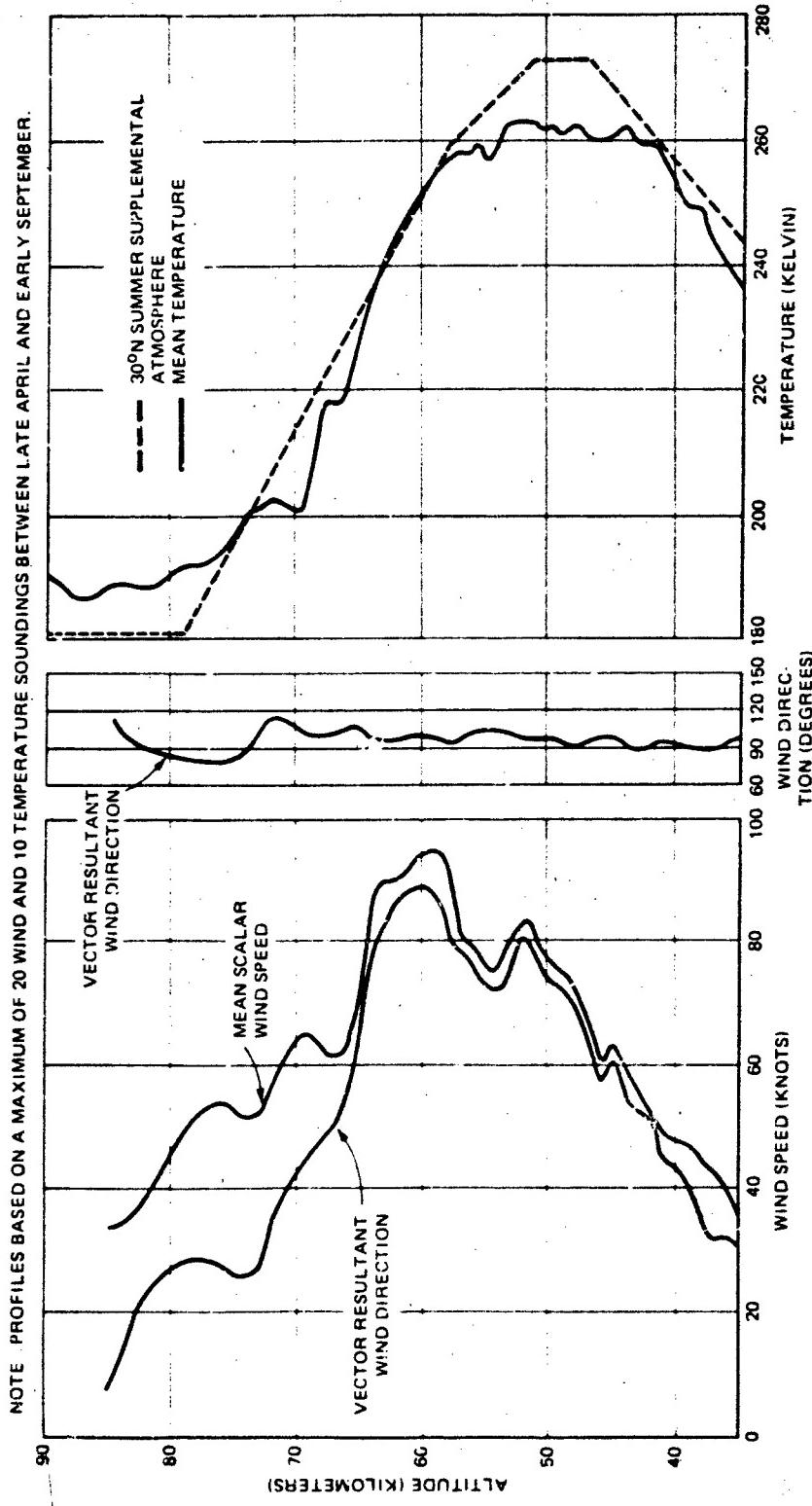


Figure B-2. Falling-Sphere-Measured High-Altitude Winds and Temperatures at Point Mugu, California: Summer.

TRANSITIONS

The three soundings that could be identified as having been made during the brief transition periods between the winter and summer provided wind data only. The means of these are listed in table B-5. The directions of these soundings were quite variable and the mean speeds are mostly under 40 knots.

Table B-5. Viper Rocket Summary Data for Point Mugu, California: Transition
(Mid-September and Mid-April).

KM	U(W)	V(S)	RS	RD	WS	NW	TK	PM8	DGM3	NT
90	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0
88	0	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0	0
85	-6.0	41.8	42.2	172	51	2	0	0	0	0
84	-11.3	40.1	41.6	164	50	2	0	0	0	0
83	-16.3	38.0	41.4	157	49	2	0	0	0	0
82	-19.6	35.8	40.8	151	47	2	0	0	0	0
81	-21.4	32.5	38.9	147	44	2	0	0	0	0
80	-20.0	35.5	40.7	151	45	3	0	0	0	0
79	-19.2	31.2	36.5	148	40	3	0	0	0	0
78	-16.5	28.3	32.7	150	37	3	0	0	0	0
77	-12.4	24.9	27.8	154	36	3	0	0	0	0
76	-2.6	19.4	20.1	173	42	3	0	0	0	0
75	10.7	10.9	15.3	224	49	3	0	0	0	0
74	23.9	-1.2	23.9	273	56	3	0	0	0	0
73	37.2	-15.9	40.5	293	61	3	0	0	0	0
72	45.2	-24.8	51.5	299	62	3	0	0	0	0
71	48.7	-16.1	51.3	288	56	3	0	0	0	0
70	42.0	-4.8	42.3	277	47	3	0	0	0	0
69	32.7	10.4	34.3	252	38	3	0	0	0	0
68	23.6	4.3	24.0	260	28	3	0	0	0	0
67	26.5	-10.5	28.5	292	32	3	0	0	0	0
66	30.6	-3.0	30.8	276	41	3	0	0	0	0
65	19.7	16.4	25.7	230	34	3	0	0	0	0
64	1.8	13.4	13.5	188	15	3	0	0	0	0
63	-9.4	1.7	9.5	100	23	3	0	0	0	0
62	-7.9	-3.8	8.8	64	28	3	0	0	0	0
61	10.8	9.0	14.1	230	26	3	0	0	0	0
60	14.2	11.3	18.1	231	32	3	0	0	0	0
59	27.2	11.3	29.5	247	31	3	0	0	0	0
58	26.0	13.4	29.2	243	30	3	0	0	0	0
57	6.0	16.7	17.8	200	24	3	0	0	0	0
56	1.8	18.1	18.2	186	23	3	0	0	0	0
55	-1.8	12.5	12.6	172	17	3	0	0	0	0
54	-0.5	20.6	20.6	179	22	3	0	0	0	0
53	-5.0	9.8	11.0	153	13	3	0	0	0	0
52	-9.7	8.4	12.8	131	17	3	0	0	0	0
51	-1.3	6.4	6.5	168	18	3	0	0	0	0
50	-1.8	4.5	4.8	158	28	3	0	0	0	0
49	9.8	5.1	11.0	242	29	3	0	0	0	0
48	.4	13.2	13.2	182	29	3	0	0	0	0
47	-1.7	5.1	5.3	162	21	3	0	0	0	0
46	-5.0	7.6	9.1	147	17	3	0	0	0	0
45	-5.3	12.4	13.4	157	28	3	0	0	0	0
44	-5.4	4.6	7.1	130	24	3	0	0	0	0
43	7.4	7.2	10.3	225	10	3	0	0	0	0
42	-0.6	8.3	12.7	131	19	3	0	0	0	0
41	-14.2	-5.1	15.1	70	20	3	0	0	0	0
40	-8.2	-19.2	20.9	23	32	3	0	0	0	0
39	2.5	-20.9	21.0	353	33	3	0	0	0	0
38	7.6	-14.4	16.3	332	30	3	0	0	0	0
37	9.2	-5.3	10.6	300	36	3	0	0	0	0
36	8.3	3.4	9.0	248	25	3	0	0	0	0
35	0	2.1	2.1	181	23	3	0	0	0	0

DATA SUMMATION

The listings of table B-6 and profiles of figure B-3 are based on the total amount of data acquired from the Point Mugu Viper firings—45 wind soundings and 18 sets of thermodynamics.

Between 35 and 70 km, the mean resultant wind has a generally southwesterly direction and a speed that gradually increases from less than 5 knots at 35 km to over 30 knots at 70 km. Above this level, the direction becomes more westerly and northwesterly as the speed decreases to near 0 at 78 km. The highest 7 km of the wind data show a shift in resultant direction to southeasterly and an increase in the resultant speed to 10 knots. The profile of the mean scalar speed shows much higher values than that of the mean resultant speed. The former is generally above 50 knots and has a peak speed of 97 knots at 60 km.

The combined mean temperature data are plotted in comparison with both the January and July 30° North Supplemental Atmospheres. The general tendency of the mean profile is to remain somewhat cooler at most altitudes below 77 km than these reference profiles and to be warmer above that level.

Table B-6. Viper Rocket Summary Data for Point Mugu, California: All Data
(October 1969 Through July 1972).

KM	U(W)	V(S)	HS	RD	WS	NW	TK	PM8	DGM3	NT
90	0	0	0	0	0	0	192	.00181	.00328	15
89	0	0	0	0	0	0	191	.00216	.00391	15
88	0	0	0	0	0	0	191	.00256	.00467	15
87	0	0	0	0	0	0	191	.00305	.00554	15
86	0	0	0	0	0	0	191	.00362	.00656	15
85	3.0	10.5	10.9	196	40	37	193	.00429	.00772	16
84	-1.3	9.6	9.7	172	41	37	194	.00509	.00913	16
83	-4.3	8.5	9.5	153	42	37	194	.00604	.01081	16
82	-4.8	5.4	7.2	138	45	38	194	.00712	.01277	17
81	-5.1	3.9	6.4	127	47	38	195	.00845	.01508	17
80	-4.6	3.4	5.7	127	49	39	196	.0101	.01776	17
79	-2.5	1.6	3.0	122	52	39	197	.01186	.02095	17
78	.3	-0.3	.4	310	55	39	198	.01403	.02475	17
77	4.1	-1.7	4.4	292	57	39	198	.01661	.02928	17
76	8.9	-2.6	9.3	286	61	39	199	.01967	.03447	17
75	15.9	-3.7	16.4	283	64	40	201	.02334	.04036	17
74	21.3	-4.0	21.7	281	67	40	204	.02764	.04719	17
73	25.4	-3.0	25.5	277	72	40	205	.03255	.05527	17
72	27.8	-1.2	27.8	273	78	40	207	.03827	.06441	17
71	31.6	-0.3	31.6	270	84	41	207	.04493	.07550	17
70	30.1	-0.4	30.1	271	83	41	206	.05282	.08935	17
69	28.0	1.1	28.0	268	80	41	213	.06195	.10110	17
68	26.9	3.5	27.1	263	78	41	219	.07224	.11446	17
67	31.7	6.9	32.4	258	82	42	221	.08401	.13188	17
66	28.1	9.4	29.6	251	86	43	226	.09753	.15001	17
65	21.9	9.7	24.0	246	90	43	232	.11280	.16861	17
64	15.8	6.7	17.2	247	92	42	237	.12890	.18853	16
63	13.0	6.0	14.3	245	92	42	243	.14809	.21179	16
62	14.5	7.3	16.2	243	94	41	247	.16967	.23812	16
61	15.4	12.0	19.5	232	95	41	251	.19392	.26788	16
60	17.7	16.0	23.8	228	97	42	253	.22130	.30310	16
59	14.5	16.1	21.7	222	95	43	256	.22310	.34268	17
58	13.2	13.1	18.6	225	88	44	256	.28992	.39277	18
57	11.2	13.9	17.9	219	83	44	257	.33028	.44637	18
56	10.9	13.7	17.5	218	81	44	258	.37604	.50551	18
55	7.9	12.7	15.0	212	78	44	256	.42807	.58008	18
54	6.9	13.8	15.5	207	78	44	260	.48681	.65011	18
53	4.5	13.7	14.5	198	80	44	259	.55377	.74090	18
52	5.2	10.9	12.1	205	83	45	259	.63019	.84278	18
51	8.5	8.7	12.2	224	83	45	260	.71630	.95591	18
50	9.7	10.3	14.2	223	82	45	261	.81465	1.08534	18
49	9.7	8.8	13.1	228	80	45	260	.92685	1.23855	18
48	9.0	7.9	12.0	229	78	45	260	1.05490	1.40581	18
47	12.0	6.5	13.6	242	75	45	258	1.20051	1.61406	18
46	13.2	6.3	14.7	244	70	45	258	1.36658	1.83910	18
45	10.2	8.1	13.0	232	70	45	258	1.55566	2.09025	18
44	9.4	5.4	10.8	240	67	45	259	1.77157	2.37701	18
43	11.0	2.9	11.4	255	64	44	256	2.01804	2.73748	18
42	7.6	5.7	9.5	233	61	45	254	2.30130	3.13834	18
41	7.6	3.2	8.2	247	59	45	252	2.62906	3.61733	18
40	8.4	.8	8.4	265	59	45	248	3.00607	4.21338	18
39	3.8	-0.5	3.8	277	55	44	248	3.44481	4.82601	18
38	6.3	-0.9	6.4	278	53	44	245	3.95051	5.6489	18
37	6.8	.2	6.8	268	51	44	237	4.51529	6.63627	17
36	3.1	3.4	4.6	222	44	44	237	5.23370	7.65975	15
35	2.2	2.5	3.4	222	41	44	235	6.03675	8.91711	15

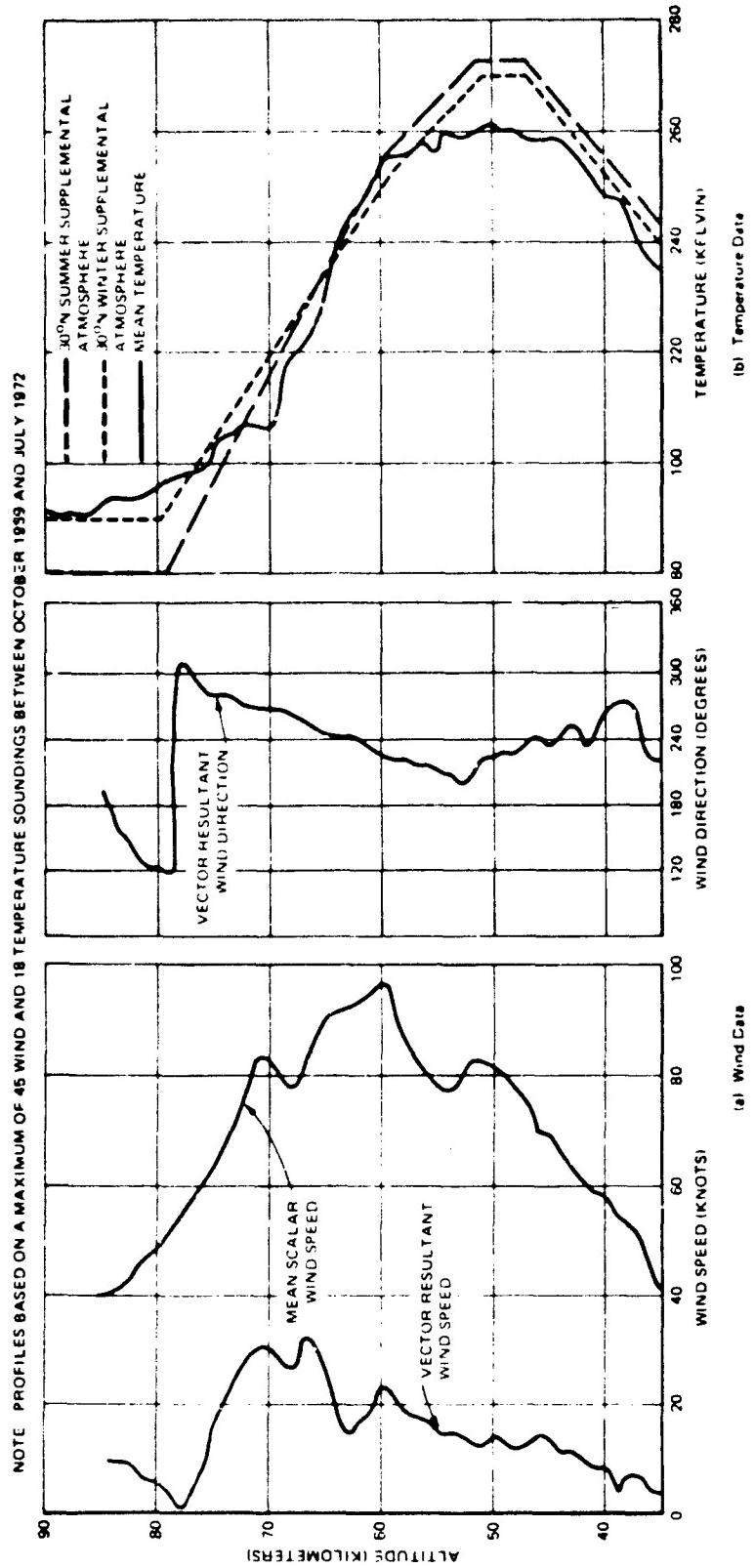


Figure 8-3. Falling-Sphere-Measured High-Altitude Winds and Temperatures at Point Mugu, California. All Data Combined

DENSITY DATA

The fall rate of the Robin sphere is used to compute the atmospheric density. Figure B-4 presents the mean winter (a), summer (b), and annual (c) density data from the Point Mugu Viper firings. These profiles are drawn in terms of percent deviation from a "reference atmosphere" value of density. The references used are the January and July 30° North Supplemental Atmospheres for the mean winter and summer data, figure B-4(a) and (b), respectively, and the 1962 U.S. Standard Atmosphere (reference B-8) for the mean of all the data (figure B-4(c)).

To aid in the comparison with the Supplemental Atmospheres, an additional profile is provided in figure B-4, (a) and (b)- the percent deviation of the 1962 U.S. Standard Atmosphere density from the Supplemental Atmosphere density for the season concerned. In turn, the deviations of both the Supplements from the Standard is plotted in figure B-4(c). Note that none of the "reference atmospheres" is completely satisfactory as a representation of the observed densities at *all* levels. However, the deviation of the observed data from these references is in large part less than 5 percent and is seldom greater than 10 percent.

The "zig-zag" occurring in all three data profiles in the 68-to-70-km stratum is again most likely a reflection of the transition of the sphere's fall rate to subsonic speeds. However, no attempt can be made at this time to provide an explanation of the other minor excursions of these profiles from a reasonably smooth curve.

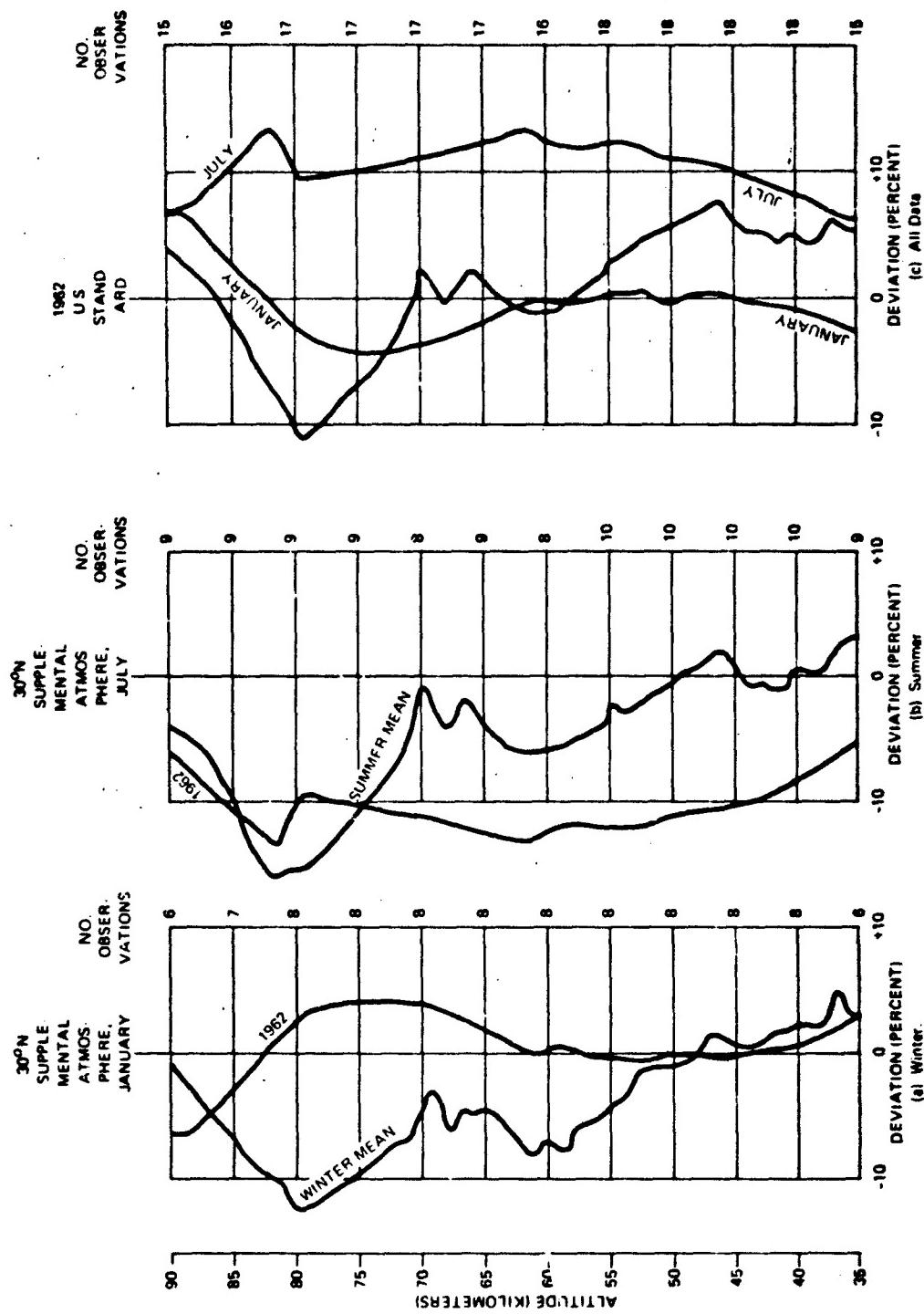


Figure B-4. Deviation From Reference Atmospheres of Density Data at Point Mugu, California.

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APPENDIX C
STANDARD AND SUPPLEMENTAL ATMOSPHERE DATA

APPENDIX C
STANDARD AND SUPPLEMENTAL ATMOSPHERE DATA

The data presented in this appendix have been compiled to provide a ready source for certain of the Standard and Supplemental Atmosphere data published in references C-1 and C-2. These publications should be consulted for details regarding the philosophies and methods used in constructing these model atmospheres.

STANDARD ATMOSPHERE DATA

Temperature, pressure, and density values from sea level to 60 kilometers and to 200,000 feet, based on the U.S. Standard Atmosphere, 1962 (reference C-1) are listed in tables C-1 and C-2, respectively. The tables also provide height conversions between kilometers and feet, and vice versa.

Table C-1. 1962 U.S. Standard Atmosphere Temperature, Pressure, and Density Data,
0 Through 60 Kilometers

Height (Kilometers)	Height (Feet)	Temperature (Degrees Celsius)	Temperature (Degrees Kelvin)	Pressure (Millibars)	Density (Grams/Meter ³)
0	0	+15.0	288.2	1013.2	1.2250
1	3,281	+8.5	281.7	898.8	1.1117
2	6,562	+2.0	275.2	795.0	1.0066
3	9,843	-4.5	268.7	701.2	0.9093
4	13,123	-11.0	262.2	616.6	0.8194
5	16,404	-17.5	255.7	540.5	0.7364
6	19,685	-24.0	249.2	472.2	0.6601
7	22,966	-30.5	242.7	411.1	0.5900
8	26,247	-36.9	236.2	356.5	0.5258
9	29,528	-43.4	229.7	308.0	0.4671
10	32,808	-49.9	223.2	265.0	0.4135
11	36,089	-56.4	216.8	227.0	0.3648
12	39,370	-56.5	216.7	194.0	0.3119
13	42,651	-56.5	216.7	165.8	0.2666
14	45,932	-56.5	216.7	141.7	0.2279
15	49,213	-56.5	216.7	121.1	0.1948
16	52,493	-56.5	216.7	103.5	0.1665
17	55,774	-56.5	216.7	88.5	0.1423
18	59,055	-56.5	216.7	75.7	0.1217
19	62,336	-56.5	216.7	64.7	0.1040
20	65,617	-56.5	216.7	55.3	0.0889
21	68,898	-55.6	217.6	47.3	0.0757
22	72,178	-54.6	218.6	40.5	0.0645
23	75,459	-53.6	219.6	34.7	0.0550
24	78,740	-52.6	220.6	29.7	0.0469
25	82,021	-51.6	221.6	25.5	0.0401
26	85,302	-50.6	222.5	21.9	0.0343
27	88,583	-49.6	223.5	18.8	0.0293
28	91,864	-48.6	224.5	16.2	0.0251
29	95,144	-47.6	225.5	13.9	0.0215
30	98,425	-46.6	226.5	12.0	0.0184
35	114,829	-36.6	236.5	5.75	0.00846
40	131,234	-22.8	250.4	2.87	0.00399
45	147,638	-9.0	264.2	1.49	0.00197
50	164,042	-2.5	270.7	0.798	0.00103
55	180,446	-7.6	265.6	0.420	0.000561
60	196,850	-17.4	255.8	0.225	0.000306

**Table C-2. 1962 U.S. Standard Atmosphere Temperature, Pressure, and Density Data,
0 Through 200,000 Feet**

Height (Feet)	Height (Kilometers)	Temperature (Degrees Celsius)	Temperature (Degrees Kelvin)	Pressure (Millibars)	Density (Grams/Meter ³)
0	0	+15.0	288.2	1013.2	1225.0
1,000	0.3048	+13.0	286.2	977.2	1189.6
2,000	0.6096	+11.0	284.2	942.1	1154.9
3,000	0.9144	+9.1	282.3	908.1	1121.0
4,000	1.214	+7.1	280.3	875.1	1087.9
5,000	1.524	+5.1	278.3	843.1	1055.6
6,000	1.829	+3.1	276.3	812.0	1024.0
7,000	2.134	+1.1	274.3	781.9	993.1
8,000	2.438	-0.8	272.4	752.7	963.0
9,000	2.743	-2.8	270.4	724.4	933.5
10,000	3.048	-4.8	268.4	696.9	904.8
15,000	4.572	-14.7	258.5	572.1	771.1
20,000	6.096	-24.6	248.6	466.0	653.1
25,000	7.620	-34.5	238.7	376.5	549.5
30,000	9.144	-44.4	228.8	301.5	459.0
35,000	10.668	-54.2	219.0	239.1	380.5
40,000	12.192	-56.5	216.7	188.2	302.7
45,000	13.716	-56.5	216.7	148.2	238.2
50,000	15.240	-56.5	216.7	116.6	187.6
55,000	16.764	-56.5	216.7	91.8	147.7
60,000	18.288	-56.5	216.7	72.3	116.3
65,000	19.812	-56.5	216.7	56.9	92.6
70,000	21.336	-55.2	218.0	44.9	71.7
75,000	22.860	-53.7	219.5	35.4	56.2
80,000	24.384	-52.2	221.0	28.0	44.2
85,000	25.908	-50.7	222.5	22.2	34.8
90,000	27.432	-49.2	224.0	17.6	27.4
95,000	28.956	-47.7	225.5	14.0	21.6
100,000	30.480	-46.2	227.0	11.1	17.1
110,000	33.528	-40.7	232.5	7.10	10.6
120,000	36.576	-32.3	240.9	4.60	6.65
130,000	39.624	-23.8	249.4	3.02	4.22
140,000	42.672	-15.4	257.8	2.01	2.72
150,000	45.720	-7.0	266.2	1.36	1.78
160,000	48.768	-2.5	270.7	0.930	1.20
170,000	51.816	-2.5	270.7	0.637	0.819
180,000	54.864	-7.3	265.9	0.435	0.570
190,000	57.912	-13.3	259.9	0.295	0.395
200,000	60.960	-19.3	253.3	0.198	0.272

SUPPLEMENTAL ATMOSPHERE DATA

To provide depictions of atmospheric conditions at latitudes and seasons other than the mid-latitude, annual, mean conditions represented by the U.S. Standard Atmosphere, the U.S. Standard Atmosphere Supplements, 1966 (reference C-2) was prepared. From this publication, data have been extracted for the 30-degree North, or subtropical, January, and July Supplemental Atmospheres and are presented in tables C-3 and C-4. As in the Standard Atmosphere tables above, these data include temperature, pressure, and density for the same altitude ranges of sea level to 60 kilometers and to 200,000 feet, but for both January and July in each table.

Table C-3. January and July Supplemental Atmospheres, 30 Degrees North, Temperature, Pressure, and Density Data, 0 Through 30 Kilometers

Height (Kilometers)	Temperature				Pressure (Millibars)		Density (Grams Meter ⁻³)	
	(Degrees Celsius)		(Degrees Kelvin)					
	January	July	January	July	January	July	January	July
0	+14.0	+28.0	287.2	310.2	1021.0	1013.5	1233.0	1159.0
1	+11.0	+20.5	284.2	293.7	906.5	904.6	1107.0	1066.0
2	+8.0	+15.0	281.2	288.2	803.8	805.1	993.4	968.6
3	+1.5	+9.5	274.7	282.7	711.2	714.8	900.5	877.6
4	-5.0	+3.0	268.2	276.2	627.4	633.1	814.2	793.7
5	-11.7	-2.0	261.5	271.2	551.7	55.9	734.0	715.9
6	-18.0	-7.0	255.2	266.2	483.7	492.9	659.9	644.3
7	-24.5	-14.0	248.7	259.2	422.6	433.1	591.6	581.4
8	-31.0	-21.0	242.2	252.2	367.9	379.1	528.8	523.2
9	-37.5	-28.0	235.7	245.2	319.1	330.7	471.3	469.4
10	-44.0	-35.0	229.2	238.2	275.7	287.3	418.7	419.9
11	-50.3	-41.8	222.9	231.4	237.2	248.6	370.7	374.2
12	-56.8	-48.7	216.4	224.4	203.2	214.1	327.0	332.4
13	-59.5	-55.7	213.6	217.5	173.4	183.6	282.8	294.1
14	-62.1	-62.7	211.1	210.5	147.8	156.6	243.9	259.2
15	-64.7	-69.6	208.5	203.5	125.7	132.9	210.1	227.5
16	-67.2	-70.0	205.9	203.2	106.7	112.5	180.5	192.9
17	-69.8	-68.0	203.3	205.2	90.4	95.3	154.9	161.7
18	-70.0	-65.8	203.2	207.4	76.5	80.8	131.2	135.7
19	-67.7	-63.6	205.4	209.6	64.8	68.7	109.9	114.2
20	-65.2	-61.4	207.9	211.8	55.0	58.5	92.1	96.2
21	-62.8	-59.2	210.4	213.9	46.8	49.0	77.4	81.2
22	-60.3	-57.2	212.9	215.9	39.8	42.6	65.2	68.7
23	-58.2	-55.2	214.9	217.9	34.0	36.4	55.1	58.2
24	-56.3	-53.3	216.9	219.9	29.1	31.2	46.7	49.4
25	-54.3	-51.3	218.9	221.9	24.9	26.8	39.6	42.0
26	-52.3	-49.3	220.9	223.9	21.3	23.0	33.7	35.8
27	-50.3	-47.3	222.9	225.9	18.3	19.8	28.6	30.6
28	-48.3	-45.8	224.8	227.8	15.8	17.1	24.4	26.1
29	-46.3	-43.3	226.8	229.8	13.6	14.7	20.8	22.3
30	-44.4	-41.4	228.8	231.8	11.7	12.7	17.8	19.1
35	-33.4	-30.4	239.8	242.8	5.68	6.23	8.25	3.94
40	-21.5	-18.5	251.6	254.6	2.86	3.16	3.96	4.33
45	-9.7	-6.7	263.4	266.4	1.46	1.66	1.97	2.17
50	-4.0	-1.0	269.2	272.2	0.794	0.891	1.03	1.14
55	-10.9	-7.9	262.2	265.2	0.423	0.478	0.562	0.628
60	-21.1	-18.4	252.0	254.8	0.221	0.251	0.305	0.344

Table C-4. January and July Supplemental Atmospheres, 30 Degrees North, Temperature, Pressure, and Density Data, 0 Through 200,000 Feet

Height (Thousands of Feet)	Temperature				Pressure (Millibars)		Density (Grams Meter ⁻³)	
	(Degrees Celsius)		(Degrees Kelvin)					
	January	July	January	July	January	July	January	July
0	+14.0	+28.0	287.2	310.2	1021.0	1013.5	1233.0	1159.0
1	+13.1	+25.5	286.3	298.7	984.7	979.3	1193.0	1130.0
2	+12.2	+23.9	285.4	297.1	949.8	946.0	1135.0	1102.0
3	+11.3	+21.1	284.5	294.3	916.0	913.6	1117.0	1074.0
4	+10.4	+19.3	283.6	292.5	883.1	881.7	1081.0	1044.0
5	+9.5	+17.6	282.7	290.8	851.3	851.3	1046.0	1014.0
6	+8.6	+16.0	281.8	289.2	810.5	821.5	1012.0	984.8
7	+7.3	+14.3	280.5	287.5	791.0	792.4	980.7	956.0
8	+5.2	+12.6	277.4	285.8	761.9	764.3	951.9	927.8
9	+3.3	+11.0	276.5	284.2	734.1	737.1	923.8	900.3
10	+1.2	+9.2	274.4	282.4	707.0	710.8	896.3	873.3
15	+8.6	+0.0	264.6	274.1	583.1	589.9	767.5	748.4
20	-19.0	-7.7	254.2	265.5	477.4	486.9	653.1	638.1
25	-28.4	-18.2	244.8	255.0	388.1	398.9	552.0	541.8
30	-38.3	-28.7	234.9	244.5	312.5	324.1	463.4	462.0
35	-48.1	-39.4	225.1	233.8	249.4	260.9	386.2	389.0
40	-57.4	-50.1	215.8	223.1	197.1	208.0	318.3	324.9
45	-61.3	-60.7	211.9	212.5	154.7	164.0	274.4	268.8
50	-65.3	-70.0	207.9	203.2	120.9	127.7	212.7	219.0
55	-69.2	-68.4	204.0	204.8	94.0	99.0	160.7	168.5
60	-69.5	-65.2	203.7	208.0	72.9	77.1	124.7	129.1
65	-65.7	-61.8	207.5	211.4	56.7	60.2	95.2	99.3
70	-61.9	-58.6	211.3	214.6	44.3	47.3	73.1	76.7
75	-58.5	-55.5	214.7	217.7	34.8	37.2	56.4	59.6
80	-55.5	-52.5	217.7	220.7	27.4	29.4	43.8	46.4
85	-52.4	-49.4	220.8	223.8	21.6	23.3	34.2	36.3
90	-49.4	-46.4	223.8	226.8	17.1	18.5	26.7	28.5
95	-46.4	-43.4	226.8	229.8	13.6	14.8	20.9	22.4
100	-43.4	-40.4	229.8	232.8	10.9	11.8	16.5	17.7
110	-36.9	-33.9	236.3	239.3	7.00	7.66	10.3	11.1
120	-29.7	-26.7	243.5	246.5	4.62	5.01	6.52	7.08
130	-22.4	-19.4	250.8	253.8	3.01	3.23	4.18	4.56
140	-15.2	-12.2	258.0	261.0	2.00	2.23	2.71	2.98
150	-8.0	-5.0	265.2	268.2	1.36	1.51	1.78	1.97
160	-4.0	-1.0	269.2	272.2	0.926	1.04	1.20	1.33
170	-4.7	-1.7	268.5	271.5	0.633	0.712	0.822	0.914
180	-10.6	-7.6	262.6	265.6	0.431	0.487	0.572	0.638
190	-16.6	-13.6	256.6	259.6	0.290	0.330	0.395	0.442
200	-24.0	-21.9	249.2	251.3	0.194	0.221	0.272	0.307

An additional feature of the Supplemental Atmospheres is the inclusion of mean moisture properties for the first 10 kilometers (33,000 feet) of each model atmosphere of that publication (reference C-1). This listing provides values of the relative humidity and temperature at levels of change in the mean moisture content, and thus permits the computation of "typical" values of the radar refractive index at these levels. This has been done for the 30-degree North January and July data, and table C-5 presents the resultant data.

Table C-5. Moisture Characteristics of the 30-Degree North Supplemental Atmospheres

January						
Height (Kilometers)	Height (Feet)	Temperature (Degrees Celsius)	Relative Humidity (Percent)	Virtual Temperature (Degrees Celsius)	Pressure (Millibars)	Radar Refractive Index (N-Units)
0.0	0	+14.0	80	+15.4	1021.0	334
1.002	3,287	+11.0	70	+12.1	933.9	298
2.003	6,571	+8.0	50	+8.7	803.5	247
3.006	9,852	+1.5	45	+1.9	710.7	216
4.008	13,149	-5.0	35	-4.8	626.8	199
6.014	19,731	-18.0	30	-17.9	482.8	149
8.021	26,316	-31.0	20	-31.0	366.8	118
10.030	32,907	-44.0	30	-44.0	274.4	93
July						
Height (Kilometers)	Height (Feet)	Temperature (Degrees Celsius)	Relative Humidity (Percent)	Virtual Temperature (Degrees Celsius)	Pressure (Millibars)	Radar Refractive Index (N-Units)
0.0	0	+28.0	80	+31.4	1013.5	386
1.002	3,287	+20.5	65	+22.4	904.4	307
2.003	6,571	+15.0	60	+16.4	804.8	263
3.006	9,852	+9.5	60	+10.6	714.3	229
4.008	13,149	+4.0	50	+4.7	632.5	197
6.014	19,731	-7.0	40	-6.7	492.0	151
8.021	26,316	-21.0	40	-20.9	378.1	110
10.030	32,907	-35.0	30	-35.0	386.1	94

TEMPERATURE VERSUS ALTITUDE PROFILES

Figure C-1 is a vertical profile of the temperature versus altitude as stated in the three model atmospheres listed above and extending from sea level through the mesopause to 90 kilometers (295,000 feet). A listing of the points of change in slope of the temperature profiles for these atmospheres is given in table C-6.

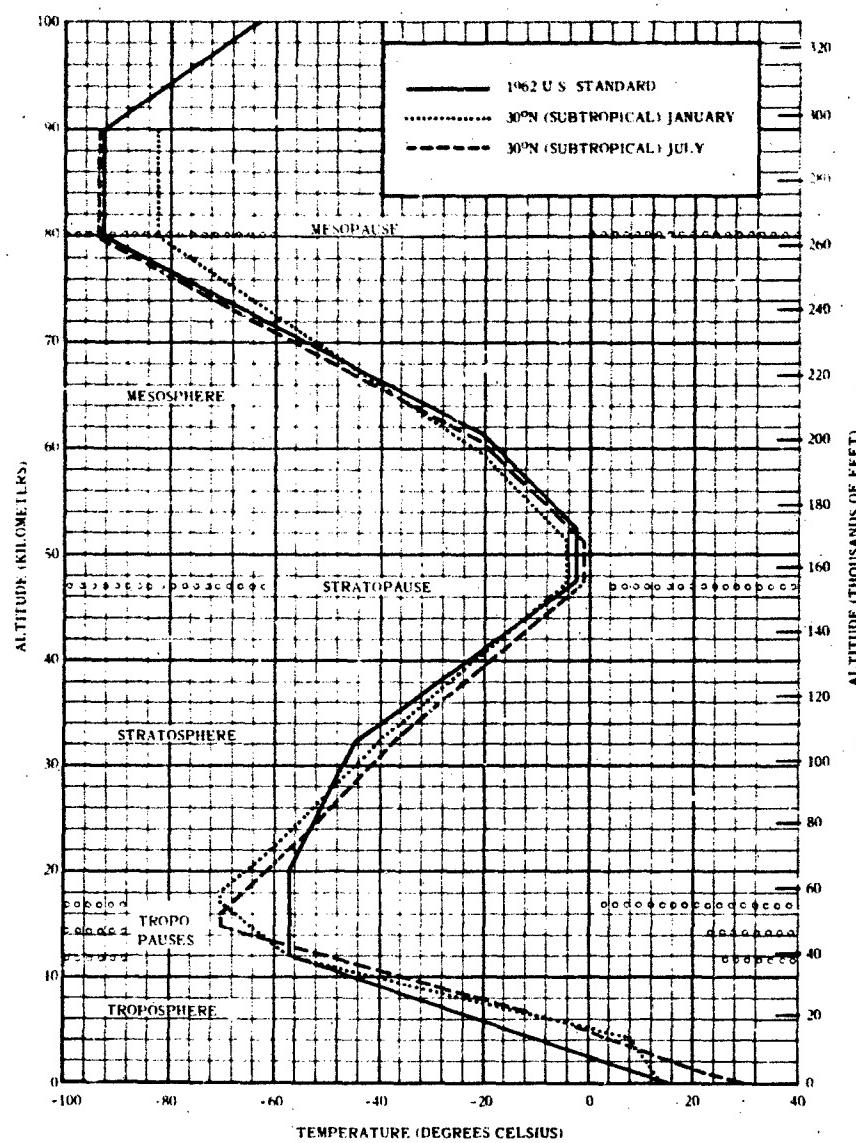


Figure C-1. Standard and Supplemental Atmospheres, Temperature Versus Altitude.

Table C-6. Significant Points of the Temperature Profiles to 90 Kilometers

U. S. Standard Atmosphere			
Height (Kilometers)	Height (Feet)	Temperature (Degrees Celsius)	Temperature (Degrees Kelvin)
0	0	+15.0	288.2
11.019	36,052	-56.5	216.7
20.063	65,823	-56.5	216.7
32.162	105,518	-44.5	228.7
47.350	155,348	-2.5	270.7
52.429	172,011	-2.5	270.7
61.591	204,070	-20.5	252.7
79.994	262,448	-92.5	180.7
90.000	295,276	-92.5	180.7
30-Degree North Supplemental Atmosphere, January			
0	0	+14.0	287.2
2.003	6,571	+8.0	281.2
12.039	39,498	-57.0	216.2
17.069	56,000	-70.0	203.2
18.076	59,304	-70.0	203.2
22.107	72,529	-60.0	213.2
32.206	105,661	-40.0	233.2
47.416	155,562	-4.0	269.2
51.484	168,909	-4.0	269.2
59.636	195,654	-20.0	253.2
80.107	262,815	-82.0	191.2
90.000	295,276	-82.0	191.2
30-Degree North Supplemental Atmosphere, July			
0	0	+28.0	301.2
1.002	3,287	+20.5	293.7
6.014	19,731	-7.0	266.2
15.056	49,396	-70.0	203.2
16.062	52,696	-70.0	203.2
21.099	69,222	-58.7	214.5
32.206	105,661	-37.0	236.2
47.416	155,562	-1.0	272.2
51.484	168,909	-1.0	272.2
59.636	195,654	-17.0	256.2
80.107	262,815	-93.0	180.2
90.000	295,276	-93.0	180.2

REFERENCES

- C-1. U.S. Committee on Extension to the Standard Atmosphere. U.S. Standard Atmosphere, 1962. Washington, D.C., GPO, Dec 1962, 27⁹ pp.**
- C-2. U.S. Committee on Extension to the Standard Atmosphere. U.S. Standard Atmosphere Supplements, 1966. Washington, D.C., GPO, 1967, 289 pp.**